

Griffiths, Helen

From: Grant, Carole
Sent: August-22-18 10:12 AM
To: Griffiths, Helen
Cc: Bradbury, Ian R
Subject: Placentia Bay genetic baseline

Helen,

Please provide the following in response to Joanne's question below:

- DFO Science are collecting baseline genetic data for wild Atlantic Salmon in Placentia Bay as part of a PARR (Program for Aquaculture Regulatory Research) funded 3-year project from 2017-2019.
- This involves sampling juvenile salmon from 26 rivers and scanning their genomes to gain a better understanding of how wild salmon are adapted to the local environment as well as calculating genetic estimates of abundance.
- This information should allow any genetic impacts of salmon aquaculture on wild populations in Placentia Bay to be evaluated in the coming years.

If you have any questions or wish to discuss, please let me know.

Carole

From: Griffiths, Helen
Sent: August-21-18 3:59 PM
To: Grant, Carole
Subject: Re: question

Thanks Carole

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Grant, Carole
Sent: Tuesday, August 21, 2018 3:21 PM
To: Griffiths, Helen
Cc: Bradbury, Ian R
Subject: Re: question

Sorry. I was supposed to get back to Joanne and totally forgot.

By way of cc, I'll ask Ian to provide a few bullets.

Carole

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Griffiths, Helen
Sent: Tuesday, August 21, 2018 1:27 PM

To: Grant, Carole
Subject: FW: question

Can you answer/confirm please? thanks

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: August-21-18 1:25 PM
To: Griffiths, Helen
Subject: question

Hi Helen,

Has DFO conducted any recent studies re the genetic structure of wild Atlantic salmon in Placentia Bay? Are there any planned for the near future?

Regards,

Joanne
709.729.2822

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Griffiths, Helen

From: Griffiths, Helen
Sent: August-22-18 10:27 AM
To: Sweeney, Joanne (joannesweeney@gov.nl.ca)
Subject: FW: Placentia Bay genetic baseline

Hi Joanne

Response to your question about recent studies re the genetic structure of wild Atlantic salmon in Placentia Bay

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Griffiths, Helen

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: August-22-18 3:44 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
Cc: Squires, Susan
Subject: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: 1834_recommendation.doc

Good Afternoon,

Thank you for your participation in the EIS review for the above-noted project. I've attached the minister's EIS recommendation for your review. Please let me know asap if there are any glaring omissions or necessary revisions.

Feel free to call me at 729-2822 if you wish to discuss.

Regards,

Joanne

Joanne Sweeney
Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

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Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Environmental Assessment Division

Registration 1834

MEMO TO: Honourable Andrew Parsons, Minister
Municipal Affairs and Environment

THROUGH: Jamie Chippett, Deputy Minister
Dana Spurrell, Assistant Deputy Minister
Susan Squires, Director, EA Division

FROM: Joanne Sweeney, Environmental Scientist, EA Division

DATE: August 22, 2018

SUBJECT: **Recommendation concerning the acceptability of the EIS
for the Placentia Bay Atlantic Salmon Aquaculture Project**

BACKGROUND

Aquaculture activities in Newfoundland and Labrador are subject to federal regulation under the mandates of Fisheries and Oceans Canada, Transport Canada, Environment Canada, Health Canada, and the Canadian Food Inspection Agency. The aquaculture industry is subject to provincial legislation under the mandates of the Department of Fisheries and Land Resources and the Department of Municipal Affairs and Environment.

On February 19, 2016, Grieg NL Nurseries Ltd. and Grieg NL Seafarms Ltd. registered the Placentia Bay Atlantic Salmon Aquaculture Project (the project) for environmental assessment in accordance with the *Environmental Protection Act*. These companies are owned by Grieg NL Salmon Ltd. (the proponent), a private company registered in Newfoundland and Labrador. Grieg is 80% owned by the Norwegian based Grieg Group and 20% owned by the Newfoundland based Ocean Choice International (OCI).

The proponent plans to construct and operate a land-based Recirculation Aquaculture System (RAS) hatchery for Atlantic salmon in the Marystown Marine Industrial Park, and marine-based farms in Placentia Bay. The land-based hatchery will be developed on approximately 10 hectares of serviced land and will produce up to seven million European-strain Atlantic salmon smolt per production cycle, for transfer to the marine-based component. The marine-based component will involve the operation of 11 seafarms located in four proposed Bay Management Areas (BMAs)

within Placentia Bay: Rushoon, Merasheen, Red Island, and Long Harbour. Each seafarm will consist of multiple cages with cage collars at the surface and nets extending down to 43 meters. The northern region of Placentia Bay, surrounding the Merasheen Islands, encompasses an area of about 245,000 hectares. The proposed four BMAs will occupy a total of 1,958 hectares, of which a total of 24 hectares will be occupied by seafarms. At peak, the seafarms will produce approximately 33,000 metric tonnes of live weight Atlantic salmon per production cycle. The development of the project, including the construction and operation of the hatchery and seafarms, will occur over an eight year phased approach before reaching peak production. The proposal describes construction of the hatchery in year one, the first arrival of eggs in year two, production of smolt and operation of seafarms increasing from two million fish per year in year three to seven million fish per year in year seven. The first harvest of fish at peak production at the seafarms is anticipated to occur in year eight.

The Minister was due to issue a decision to the proponent regarding the acceptability of the EIS by July 31, 2018, in order to meet the timeline prescribed by the *Environmental Assessment Regulations*, which require the decision to be issued to the proponent within 70 days of submission of the EIS document(s). A copy of EIS is provided in Annex A.

CHRONOLOGY

The Province carried out an environmental assessment of the project pursuant to the *Environmental Protection Act* and the *Environmental Assessment Regulations*. Specific phases of the assessment included:

- February 19, 2016 – project registered
- July 22, 2016 - Minister released project subject to terms and conditions
- August 31 & September 29, 2016 – appeals of Minister's release decision
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INTERGOVERNMENTAL CONSULTATION

The EIS and associated documents were circulated to the EAC for review and the provision of scientific and technical project-related advice, as well as a recommendation as to whether the EIS is acceptable and whether the project can proceed in an environmentally acceptable manner.

Provincial government departments represented on the EAC are:

- Department of Municipal Affairs and Environment (MAE)
 - Environmental Assessment Division (EA Division)
 - Pollution Prevention Division (PPD)
 - Water Resources Management Division (WRMD)
- Department of Fisheries and Land Resources (FLR)
 - Aquaculture Development Division (ADD)
 - Aquatic Animal Health Division (AAHD)
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 - Tourism Product Development (Tourism)

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- Environment and Climate Change Canada (ECCC)
- Health Canada (HC)
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The Canadian Food Inspection Agency (CFIA) informed that they are available to participate in an advisory role, if needed.

[REDACTED]

[REDACTED]

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- Burin
- Fortune
- Grand Bank
- Marystown
- Placentia
- Rushoon
- Southern Harbour
- St. Brides
- St. Lawrence

MAE received 20 requests for an extension of the public review period deadline, ranging in length from a few weeks to a few months. Twelve of these requests were from individuals and eight were from organizations (e.g., NL-Coalition for Aquaculture Reform, Gander Bay Indian Band Council, Atlantic Salmon Federation and others). In response, the Minister of MAE granted a two-week extension to the public comment period, with a new public comment deadline of July 25, 2018. An Environmental Assessment News Bulletin was published on the Government of Newfoundland and Labrador's web site and the MAE web site on July 11, 2018, advising the public that the public comment period had been extended. Additionally, notification was sent to subscribers of the Environmental Assessment News Bulletin.

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- Newfoundland Styro
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- Harbour Grace Ocean Enterprises
- Long Harbour Development Association
- Pennecon
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- Salmonid Association of Eastern Newfoundland

A copy of all public submissions is provided in Annex B.

**Pages 2015 to / à 2072
are withheld pursuant to section
sont retenues en vertu de l'article**

13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Andrews, Catherine

From: Keats, Kimberley F
Sent: August-23-18 10:17 AM
To: Andrews, Catherine
Subject: RE: Grieg NL EEM Plan

Hi Cathy,

We've been asked to provide comments by Monday. I've reviewed as well but some sections seem vague to me. I thought I'd get your take as well. Helen mentioned that it's just a preliminary draft but asked us to take a look to see if there's anything we think should be included that hasn't been.

Thanks,
Kim

From: Andrews, Catherine
Sent: August 23, 2018 9:59 AM
To: Keats, Kimberley F
Subject: RE: Grieg NL EEM Plan

Hi Kim,
I am reviewing Grieg EEM Plan as requested. I am wondering what is the deadline for response?
Cheers
Cathy

From: Keats, Kimberley F
Sent: August-22-18 3:39 PM
To: Andrews, Catherine
Subject: Grieg NL EEM Plan

Hi Cathy,

Can you have a read through the Grieg NL EEM Plan (attached)? It doesn't require extensive review. We've only been asked to provide comments from FPP perspective, mostly on benthic habitat monitoring.

Thanks,
Kim

Johnson, Roger

From: Hendry, Christopher
Sent: Thursday, August 23, 2018 11:29 AM
To: Griffiths, Helen; Grant, Carole; Johnson, Roger
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: 1834_recommendation CH.doc

Some small suggestions tracked. Overall, I think it satisfies our concerns.
Chris

From: Griffiths, Helen
Sent: August 23, 2018 10:27 AM
To: Hendry, Christopher; Grant, Carole; Johnson, Roger
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project

Folks

Only received this yesterday afternoon at 330pm, so I notified Joanne that both Chris and Carole are out of the office, and not to expect a response until Monday, earliest. She just calls me to tell me that this document is moving very fast within the province, and suggested that I send any comments by noon today. I'll have a look, based on my level of knowledge of this file.....point made I trust.

Roger, any chance you can have a quick look at the relevant sections? Anywhere DFO comments show up

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: August-22-18 3:44 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
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Registration 1834

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THROUGH: Jamie Chippett, Deputy Minister
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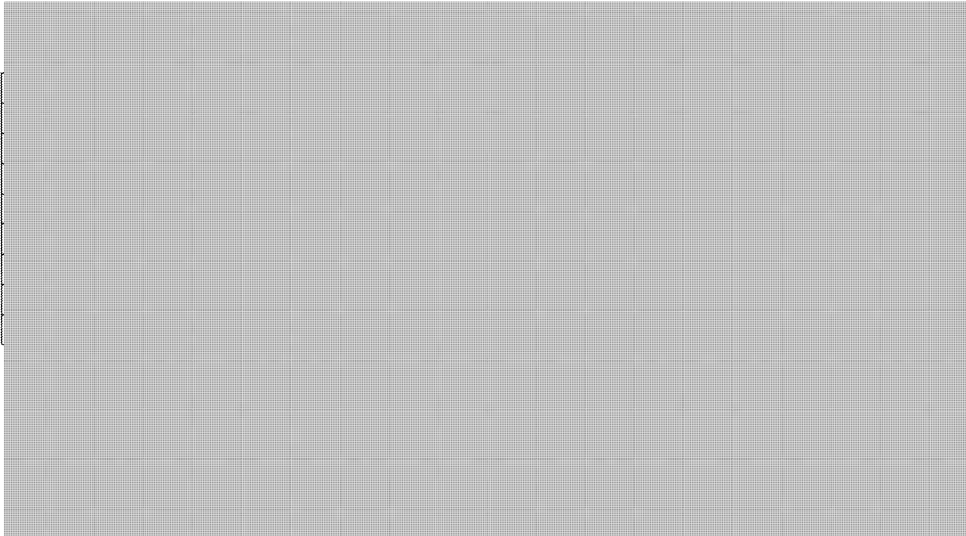
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**Pages 2081 to / à 2085
are withheld pursuant to section
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13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Page 2086

**is withheld pursuant to sections
est retenue en vertu des articles**

21(1)(b), 13(1)(c)

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13(1)(c)

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Page 2095

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21(1)(b), 13(1)(c)

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**Pages 2096 to / à 2133
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13(1)(c)

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Page 2134

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21(1)(b), 13(1)(c)

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**Pages 2135 to / à 2138
are withheld pursuant to section
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Johnson, Roger

From: Griffiths, Helen
Sent: Thursday, August 23, 2018 12:05 PM
To: Johnson, Roger
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: 1834_recommendation CH - DFO comments Aug 23-2018.doc

Hopefully this goes away for a while

From: Griffiths, Helen
Sent: August-23-18 12:03 PM
To: 'Sweeney, Joanne'
Cc: Finn, Ray; Bieger, Tilman
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project

Hi Joanne
See attached for comments.
Tight timeline but I did manage a quick review of DFO comments.

Any questions, give me a call.
Helen

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To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
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within Placentia Bay: Rushoon, Merasheen, Red Island, and Long Harbour. Each seafarm will consist of multiple cages with cage collars at the surface and nets extending down to 43 meters. The northern region of Placentia Bay, surrounding the Merasheen Islands, encompasses an area of about 245,000 hectares. The proposed four BMAs will occupy a total of 1,958 hectares, of which a total of 24 hectares will be occupied by seafarms. At peak, the seafarms will produce approximately 33,000 metric tonnes of live weight Atlantic salmon per production cycle. The development of the project, including the construction and operation of the hatchery and seafarms, will occur over an eight-year phased approach before reaching peak production. The proposal describes construction of the hatchery in year one, the first arrival of eggs in year two, production of smolt and operation of seafarms increasing from two million fish per year in year three to seven million fish per year in year seven. The first harvest of fish at peak production at the seafarms is anticipated to occur in year eight.

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CHRONOLOGY

The Province carried out an environmental assessment of the project pursuant to the *Environmental Protection Act* and the *Environmental Assessment Regulations*. Specific phases of the assessment included:

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The EIS and associated documents were circulated to the EAC for review and the provision of scientific and technical project-related advice, as well as a recommendation as to whether the EIS is acceptable and whether the project can proceed in an environmentally acceptable manner.

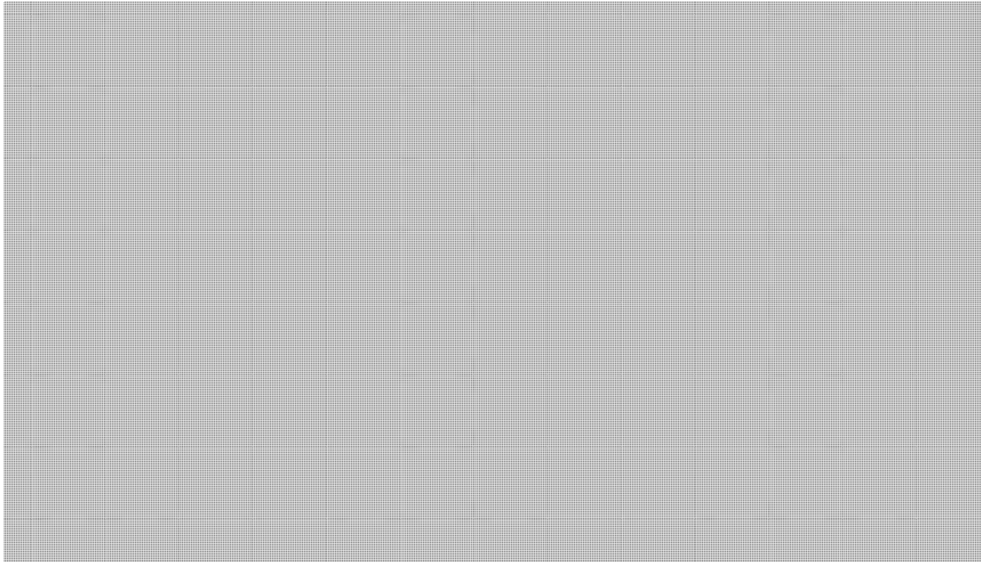
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 - Water Resources Management Division (WRMD)
- Department of Fisheries and Land Resources (FLR)
 - Aquaculture Development Division (ADD)
 - Aquatic Animal Health Division (AAHD)
 - Forestry and Wildlife Branch (FWB)
- Department of Tourism, Culture, Industry, and Innovation (TCII)
 - Tourism Product Development (Tourism)

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PUBLIC CONSULTATION

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- Burin
- Fortune
- Grand Bank
- Marystown
- Placentia
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- Southern Harbour
- St. Brides
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MAE received 20 requests for an extension of the public review period deadline, ranging in length from a few weeks to a few months. Twelve of these requests were from individuals and eight were from organizations (e.g., NL-Coalition for Aquaculture Reform, Gander Bay Indian Band Council, Atlantic Salmon Federation and others). In response, the Minister of MAE granted a two-week extension to the public comment period, with a new public comment deadline of July 25, 2018. An Environmental Assessment News Bulletin was published on the Government of Newfoundland and Labrador's web site and the MAE web site on July 11, 2018, advising the public that the public comment period had been extended. Additionally, notification was sent to subscribers of the Environmental Assessment News Bulletin.

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s.13(1)(c)

Groups expressing support for the project include:

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- Newfoundland Styro
- Burin Peninsula Joint Council
- Edwards & Associates Ltd.
- Eimskip Canada
- Harbour Grace Ocean Enterprises
- Long Harbour Development Association
- Pennecon
- Placentia West Development Association
- Town of Burin
- Town of Marystown
- Building Trades of Newfoundland and Labrador (Trades NL)
- Burin Peninsula Chamber of Commerce
- Grand Bank Development Corporation
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- Town of Winterland

Groups expressing concern for and opposition to the project include:

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- For a New Earth
- Mercy for Animals
- NL-CAR
- Newfoundland and Labrador Wildlife Federation
- Port au Port Bay Fishery Committee
- Qalipu First Nations
- Salmonid Association of Eastern Newfoundland

A copy of all public submissions is provided in Annex B.

**Pages 2146 to / à 2159
are withheld pursuant to section
sont retenues en vertu de l'article**

13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Page 2160

**is withheld pursuant to sections
est retenue en vertu des articles**

21(1)(b), 13(1)(c)

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de la Loi sur l'accès à l'information**

**Pages 2161 to / à 2168
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13(1)(c)

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Page 2169

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**Pages 2170 to / à 2192
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Page 2193

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**Pages 2194 to / à 2203
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Grant, Carole

From: Grant, Carole
Sent: Thursday, August 23, 2018 12:16 PM
To: Griffiths, Helen
Cc: Hendry, Christopher; Johnson, Roger
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: EIS Salmonids Comments - Aug. 23.doc

Helen,

One quick comment in attached. Basically the letter from the Minister of MAE currently states '*DFO also advised that the EIS was reviewed by the Canadian Science Advisory Secretariat (CSAS), that the DFO comments includes their review, and that the CSAS report may be publically available at <http://www.dfo-mpo.gc.ca/csas-sccs/index-eng.htm> at some point*'. The wording should be revised to state that the '*CSAS report will be publically available*' and it will likely be early fall, so we could add this as well instead of stating '*at some point*'.

Hope this helps.

If you have any questions or wish to discuss, please let me know.

Thanks
Carole

From: Griffiths, Helen
Sent: August-23-18 10:27 AM
To: Hendry, Christopher; Grant, Carole; Johnson, Roger
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project

Folks

Only received this yesterday afternoon at 330pm, so I notified Joanne that both Chris and Carole are out of the office, and not to expect a response until Monday, earliest. She just calls me to tell me that this document is moving very fast within the province, and suggested that I send any comments by noon today. I'll have a look, based on my level of knowledge of this file.....point made I trust.

Roger, any chance you can have a quick look at the relevant sections? Anywhere DFO comments show up

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: August-22-18 3:44 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
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Good Afternoon,

Thank you for your participation in the EIS review for the above-noted project. I've attached the minister's EIS recommendation for your review. Please let me know asap if there are any glaring omissions or necessary revisions.

Feel free to call me at 729-2822 if you wish to discuss.

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Environmental Assessment Division

Registration 1834

MEMO TO: Honourable Andrew Parsons, Minister
Municipal Affairs and Environment

THROUGH: Jamie Chippett, Deputy Minister
Dana Spurrell, Assistant Deputy Minister
Susan Squires, Director, EA Division

FROM: Joanne Sweeney, Environmental Scientist, EA Division

DATE: August 22, 2018

SUBJECT: **Recommendation concerning the acceptability of the EIS
for the Placentia Bay Atlantic Salmon Aquaculture Project**

BACKGROUND

Aquaculture activities in Newfoundland and Labrador are subject to federal regulation under the mandates of Fisheries and Oceans Canada, Transport Canada, Environment Canada, Health Canada, and the Canadian Food Inspection Agency. The aquaculture industry is subject to provincial legislation under the mandates of the Department of Fisheries and Land Resources and the Department of Municipal Affairs and Environment.

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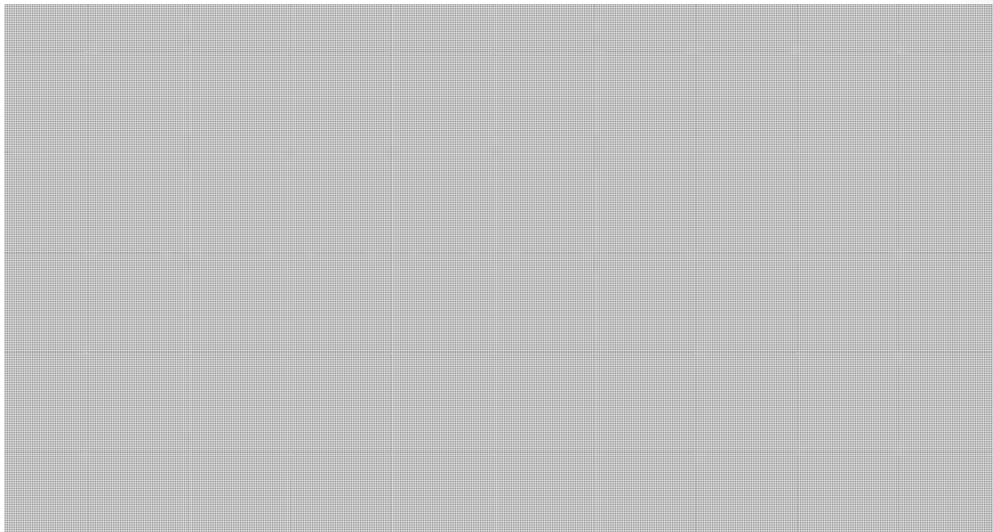
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13(1)(c)

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Page 2214

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Johnson, Roger

From: Griffiths, Helen
Sent: Thursday, August 23, 2018 12:19 PM
To: Grant, Carole
Cc: Hendry, Christopher; Johnson, Roger
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project

I picked up on that ☺ thank you!

From: Grant, Carole
Sent: August-23-18 12:16 PM
To: Griffiths, Helen
Cc: Hendry, Christopher; Johnson, Roger
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project

Helen,

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If you have any questions or wish to discuss, please let me know.

Thanks
Carole

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Sent: August-23-18 10:27 AM
To: Hendry, Christopher; Grant, Carole; Johnson, Roger
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project

Folks

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Roger, any chance you can have a quick look at the relevant sections? Anywhere DFO comments show up

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: August-22-18 3:44 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen

Cc: Squires, Susan

Subject: Placentia Bay Atlantic Salmon Aquaculture Project

Good Afternoon,

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Feel free to call me at 729-2822 if you wish to discuss.

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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Griffiths, Helen

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: August-23-18 2:13 PM
To: Griffiths, Helen
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: 1834_recommendation CH - DFO comments Aug 23-2018.doc

My apologies Helen, the correct copy is attached.

Joanne Sweeney

Environmental Assessment Division
Department of Municipal Affairs and Environment
PO Box 8700, St. John's NL A1B 4J6
Tel. (709) 729-2822

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Sent: Thursday, August 23, 2018 2:02 PM
To: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project

Is this correct attachment?

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: August-23-18 1:37 PM
To: Griffiths, Helen
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project

Hi Helen,

Thanks Hele, I really appreciate the quick turn-around. Please see EA responses to a couple of comments. Feel free to call me if you'd like to discuss.

Joanne
Tel. (709) 729-2822

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Sent: Thursday, August 23, 2018 12:03 PM
To: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Cc: Finn, Ray <Ray.Finn@dfo-mpo.gc.ca>; Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project

Hi Joanne
See attached for comments.
Tight timeline but I did manage a quick review of DFO comments.

Any questions, give me a call.
Helen

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]

Sent: August-22-18 3:44 PM

To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen

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Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Environmental Assessment Division

Registration 1834

MEMO TO: Honourable Andrew Parsons, Minister
Municipal Affairs and Environment

THROUGH: Jamie Chippett, Deputy Minister
Dana Spurrell, Assistant Deputy Minister
Susan Squires, Director, EA Division

FROM: Joanne Sweeney, Environmental Scientist, EA Division

DATE: August 22, 2018

SUBJECT: **Recommendation concerning the acceptability of the EIS
for the Placentia Bay Atlantic Salmon Aquaculture Project**

BACKGROUND

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The proponent plans to construct and operate a land-based Recirculation Aquaculture System (RAS) hatchery for Atlantic salmon in the Marystown Marine Industrial Park, and marine-based farms in Placentia Bay. The land-based hatchery will be developed on approximately 10 hectares of serviced land and will produce up to seven million European-strain Atlantic salmon smolt per production cycle, for transfer to the marine-based component. The marine-based component will involve the operation of 11 seafarms located in four proposed Bay Management Areas (BMAs)

- 2 -

within Placentia Bay: Rushoon, Merasheen, Red Island, and Long Harbour. Each seafarm will consist of multiple cages with cage collars at the surface and nets extending down to 43 meters. The northern region of Placentia Bay, surrounding the Merasheen Islands, encompasses an area of about 245,000 hectares. The proposed four BMAs will occupy a total of 1,958 hectares, of which a total of 24 hectares will be occupied by seafarms. At peak, the seafarms will produce approximately 33,000 metric tonnes of live weight Atlantic salmon per production cycle. The development of the project, including the construction and operation of the hatchery and seafarms, will occur over an eight-year phased approach before reaching peak production. The proposal describes construction of the hatchery in year one, the first arrival of eggs in year two, production of smolt and operation of seafarms increasing from two million fish per year in year three to seven million fish per year in year seven. The first harvest of fish at peak production at the seafarms is anticipated to occur in year eight.

The Minister was due to issue a decision to the proponent regarding the acceptability of the EIS by July 31, 2018, in order to meet the timeline prescribed by the *Environmental Assessment Regulations*, which require the decision to be issued to the proponent within 70 days of submission of the EIS document(s). A copy of EIS is provided in Annex A.

CHRONOLOGY

The Province carried out an environmental assessment of the project pursuant to the *Environmental Protection Act* and the *Environmental Assessment Regulations*. Specific phases of the assessment included:

- February 19, 2016 – project registered
- July 22, 2016 - Minister released project subject to terms and conditions
- August 31 & September 29, 2016 – appeals of Minister's release decision
- October 14 & October 19, 2016 – Minister's decisions announced to dismiss appeals
- July 20, 2017 – Supreme Court of Newfoundland and Labrador overturned Minister's release decision and ordered the completion of an EIS
- November 9, 2017 – Minister advised proponent that an EIS is required.
- November 22, 2017 – Minister appointed an environmental assessment committee (EAC) and the EAC drafted EIS guidelines for public review and comment
- March 8, 2018 – Minister issued approved EIS guidelines to proponent within legislated timeline of 120 days after notifying the proponent of EIS requirement
- May 22, 2018 – Minister acknowledged receipt of the EIS and initiated 50-day public and technical review
- July 11, 2018 – initial deadline for public EIS comments
- July 25, 2018 – extended deadline for public EIS comments
- July 31, 2018 – Minister's EIS acceptability decision was initially due
- August 21, 2018 – extended deadline for Minister's EIS decision

- 3 -

INTERGOVERNMENTAL CONSULTATION

The EIS and associated documents were circulated to the EAC for review and the provision of scientific and technical project-related advice, as well as a recommendation as to whether the EIS is acceptable and whether the project can proceed in an environmentally acceptable manner.

Provincial government departments represented on the EAC are:

- Department of Municipal Affairs and Environment (MAE)
 - Environmental Assessment Division (EA Division)
 - Pollution Prevention Division (PPD)
 - Water Resources Management Division (WRMD)
- Department of Fisheries and Land Resources (FLR)
 - Aquaculture Development Division (ADD)
 - Aquatic Animal Health Division (AAHD)
 - Forestry and Wildlife Branch (FWB)
- Department of Tourism, Culture, Industry, and Innovation (TCII)
 - Tourism Product Development (Tourism)

Federal government departments represented on the EAC are:

- Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada (ECCC)
- Health Canada (HC)
- Transport Canada (TC)

The Canadian Food Inspection Agency (CFIA) informed that they are available to participate in an advisory role, if needed.

s.13(1)(c)

- 4 -

PUBLIC CONSULTATION

An Environmental Assessment News Bulletin was published on the Government of Newfoundland and Labrador's web site and the MAE web site on May 22, 2018, advising the public that the EIS had been submitted and requesting that public review comments be submitted within 50 days (by July 11, 2018). The EIS document, component studies, and associated appendices describing the proposed undertaking were posted on the MAE web site. A notification was sent to subscribers of the Environmental Assessment News Bulletin (includes environmental groups, media, government agencies, municipal organizations and interested members of the public) advising of the EIS submission and initiation of the public review period. The following Towns/ Communities in the vicinity of the proposed project area were advised of the EIS submission and the public review period:

- Burin
- Fortune
- Grand Bank
- Marystown
- Placentia
- Rushoon
- Southern Harbour
- St. Brides
- St. Lawrence

MAE received 20 requests for an extension of the public review period deadline, ranging in length from a few weeks to a few months. Twelve of these requests were from individuals and eight were from organizations (e.g., NL-Coalition for Aquaculture Reform, Gander Bay Indian Band Council, Atlantic Salmon Federation and others). In response, the Minister of MAE granted a two-week extension to the public comment period, with a new public comment deadline of July 25, 2018. An Environmental Assessment News Bulletin was published on the Government of Newfoundland and Labrador's web site and the MAE web site on July 11, 2018, advising the public that the public comment period had been extended. Additionally, notification was sent to subscribers of the Environmental Assessment News Bulletin.

The public was engaged in the EIS review process, as emails/letters were received from 29 individuals and 17 groups in support of the project. Emails and letters expressing concern and opposition to the project were received from 87 individuals and 12 groups. Additionally, 423 copies of a form letter expressing concern and opposition to the project, each with an individual signature, were submitted during the public consultation period.

s.13(1)(c)

- 5 -

Groups expressing support for the project include:

- Newfoundland Aquaculture Industry Association (NAIA)
- Keyin College, Burin Peninsula
- Newfoundland Styro
- Burin Peninsula Joint Council
- Edwards & Associates Ltd.
- Eimskip Canada
- Harbour Grace Ocean Enterprises
- Long Harbour Development Association
- Pennecon
- Placentia West Development Association
- Town of Burin
- Town of Marystown
- Building Trades of Newfoundland and Labrador (Trades NL)
- Burin Peninsula Chamber of Commerce
- Grand Bank Development Corporation
- Marystown Lions Club
- Town of Winterland

Groups expressing concern for and opposition to the project include:

- FFAW-Unifor
- Freshwater-Alexander Bays Ecosystem Corporation (FABEC)
- Atlantic Salmon Federation
- Centre for Long-term Environmental Action in Nf/Ld
- For a New Earth
- Mercy for Animals
- NL-CAR
- Newfoundland and Labrador Wildlife Federation
- Port au Port Bay Fishery Committee
- Qalipu First Nations
- Salmonid Association of Eastern Newfoundland

A copy of all public submissions is provided in Annex B.

**Pages 2278 to / à 2281
are withheld pursuant to section
sont retenues en vertu de l'article**

13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Page 2282

**is withheld pursuant to sections
est retenue en vertu des articles**

21(1)(b), 13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

**Pages 2283 to / à 2290
are withheld pursuant to section
sont retenues en vertu de l'article**

13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

**Pages 2291 to / à 2292
are withheld pursuant to sections
sont retenues en vertu des articles**

21(1)(b), 13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

**Pages 2293 to / à 2324
are withheld pursuant to section
sont retenues en vertu de l'article**

13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Page 2325

**is withheld pursuant to sections
est retenue en vertu des articles**

21(1)(b), 13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

**Pages 2326 to / à 2330
are withheld pursuant to section
sont retenues en vertu de l'article**

13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Page 2331

**is withheld pursuant to sections
est retenue en vertu des articles**

21(1)(b), 13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

**Pages 2332 to / à 2335
are withheld pursuant to section
sont retenues en vertu de l'article**

13(1)(c)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Hendry, Christopher

From: Hendry, Christopher
Sent: August-24-18 11:05 AM
To: [REDACTED] kawaja, jonathan; [REDACTED]
Cc: [REDACTED]
Subject: RE: Current Monitoring for site licenses

[REDACTED] We have no formal format requirements for data presentation. Feel free to call me to discuss the different options. Regards.

Chris

Christopher Hendry, B.Sc. (Hons.), M.Sc.

Regional Aquaculture Coordinator, Ecosystems Management Branch
Fisheries and Oceans Canada, Government of Canada
chris.hendry@dfo-mpo.gc.ca / Tel: 709-772-6674

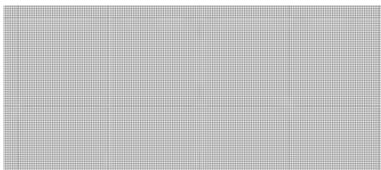
Coordonnateur régional, Aquaculture, direction de la gestion des écosystèmes
Pêches et Océans Canada, Gouvernement du Canada
chris.hendry@dfo-mpo.gc.ca / Tél.: 709-772-6674

From: [REDACTED]
Sent: August-23-18 2:59 PM
To: Hendry, Christopher; kawaja, jonathan
Cc: [REDACTED]
Subject: RE: Current Monitoring for site licenses

Hi,

Is there a specific format (i.e. color plot, exceedance plot, nontidal current time series, PVD plot) that you would recommend for the data to be presented?

Thanks,



Grieg NL
PO Box 457
205 McGettigan Blvd.
Marystown, NL A0E 2M0

Tel: 709.279.3440
Cell: [REDACTED]
Internet: www.griegnl.ca

s.19(1)



From: Hendry, Christopher <Christopher.Hendry@dfo-mpo.gc.ca>

Sent: August 23, 2018 12:06 PM

To: [REDACTED] kawaja, jonathan <jonathankawaja@gov.nl.ca>

Cc: [REDACTED]

<[REDACTED]>

Subject: Re: Current Monitoring for site licenses

[REDACTED]

While the AAR is not prescriptive on how much data to collect in order to run a predictive depositional model, the guidance I am providing is at least three current depths: the point of deposition (i.e. the bottom of a cage), close to the benthos, and a depth in between. Most acoustic doppler current meters can accomplish multiple depths without undue difficulty. I hope this helps.

Chris

----- Original message -----

From: [REDACTED]

Date: 2018-08-23 10:17 (GMT-05:00)

To: "Hendry, Christopher" <Christopher.Hendry@dfo-mpo.gc.ca>, "kawaja, jonathan" <jonathankawaja@gov.nl.ca>

Cc: [REDACTED]

Subject: Current Monitoring for site licenses

Hi,

We are planning on collections current data for sites with depth ranges of 203m, 238m and 268m. Would it be sufficient to collect current information for the top 100m or is it necessary to collect the whole water column?

Thanks,

[REDACTED]

s.19(1)

Grieg NL
PO Box 457
205 McGettigan Blvd.
Marystown, NL A0E 2M0

Tel: 709.279.3440

Cell: [REDACTED]

Internet: www.griegnl.ca

s.19(1)



No further information has been removed or severed from this page

Hendry, Christopher

From: Hendry, Christopher
Sent: August-24-18 12:00 PM
To: Johnson, Roger
Subject: RE: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Some comments:

- The consultant correctly indicates that benthic sampling will be done as per the protocols outlined under the Aquaculture Activities Regulations. These are easily available online.
- In section 4.11.3 (Therapeutants and Antibiotics), they indicate that should the use of therapeutants or antibiotics become necessary, they will attempt to collect samples of deposited organic material in the vicinity of sea cages to analyse for presence chemicals found in these substances. This is not a requirement under AAR. Any approved therapeutant or antibiotic would have undergone a risk assessment by Health Canada to determine appropriate method of delivery and dosage, and all must require veterinary oversight.
- There is an Appendix B-2A that indicates DFLR Protocol for Benthic Habitat Monitoring. The Province has no such requirements. Any benthic monitoring requirements are managed by DFO under the AAR. Any benthic baseline requirements included in the provincial aquaculture site application are provided by DFO.

From: Johnson, Roger
Sent: August-22-18 9:19 AM
To: Hendry, Christopher
Subject: FW: Slightly revised Grieg NL EEMP for further distribution within DFO Science

As member of the EA committee and the current expert on AAR please have a look at this to see if it dove tails at all with AAR. There is a little more in here than may be in an normal EEM and it may stray into the AAR and other regulatory functions but that was a way of incorporating some of the comments from the EIS review.

I know timeline is short but it is not an extensive document, it has been somewhat retooled based on some brief comments from Ian

Also notice post it note on your monitor – small problem with travel claim – we can discuss

From: Griffiths, Helen
Sent: Wednesday, August 22, 2018 9:12 AM
To: Grant, Carole <Carole.Grant@dfo-mpo.gc.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: FW: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Hi
revised version. Would it be possible to get comments from you folks by Monday? This is just a draft, and they realize that, so very likely other opportunities to provide input.
Thanks
Helen

From: [REDACTED]
Sent: August-21-18 4:33 PM
To: Griffiths, Helen

s.19(1)

Cc: [REDACTED]
Subject: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Hi Helen,

Thanks again to you and Roger for meeting with us this afternoon. It was a helpful session. Attached is the EEMP with revised text in Section 4.5, based on Ian Bradbury's comments.

[REDACTED]
[REDACTED]

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Sent: Monday, August 20, 2018 5:02 PM
To: [REDACTED]
Subject: Re: Draft Grieg NL EEMP - to discuss at meeting at LGL on 21 August @ 14:30

[REDACTED]
Sent from my BlackBerry 10 smartphone on the Bell network.

From: [REDACTED]
Sent: Monday, August 20, 2018 4:57 PM
To: Griffiths, Helen; Bieger, Tilman
Cc: [REDACTED]
Subject: Draft Grieg NL EEMP - to discuss at meeting at LGL on 21 August @ 14:30

Hi Helen,

Attached is a draft version of the EEMP associated with Grieg NL's proposed Placentia Bay aquaculture project. The primary reason for providing the draft to DFO is to get feedback and/or direction on the EEMP as it stands at the moment. Obviously it is a document in progress so the 'TBD' designations in the appendix tables are temporary and will be replaced with specific text. Of the monitoring topics given consideration as per the EIS guidelines, *'biological diversity, composition, abundance, distribution, population dynamics, and habitat utilization of fish, marine mammals and seabirds'* represents the biggest challenge, as written. It is quite broad brush in nature so monitoring programs associated with this topic require considerable discussion and thought.

Thanks Helen. We'll see you folks tomorrow at 14:30.

[REDACTED]

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Sent: Friday, August 17, 2018 11:25 AM
To: [REDACTED] Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>
Cc: [REDACTED] Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: RE: Meeting to discuss Grieg NL EEMP

[REDACTED]
That's good for us. Anticipate receiving a draft EEMP on Monday.

Thanks
Helen

s.19(1)

From: [REDACTED]
Sent: August-17-18 10:49 AM
To: Griffiths, Helen; Bieger, Tilman
Cc: [REDACTED]
Subject: RE: Meeting to discuss Grieg NL EEMP

Hi Helen,

We're proposing to meet with you on Tuesday, August 21 at the LGL office @ 14:30. How does this sound to you?

Thanks.

[REDACTED]

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Sent: Friday, August 17, 2018 8:51 AM
To: [REDACTED] Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>
Cc: [REDACTED]
Subject: RE: Meeting to discuss Grieg NL EEMP

[REDACTED]

Can you give me a call before 9:30am?

Helen
772-4088

From: [REDACTED]
Sent: August-17-18 7:53 AM
To: Bieger, Tilman; Griffiths, Helen
Cc: [REDACTED]
Subject: RE: Meeting to discuss Grieg NL EEMP

Hello Tilman and Helen,

As a follow-up to Wednesday's emails, a Tuesday afternoon meeting next week would be preferred, if possible. Is there any chance of confirming that meeting time today?

Thanks.

[REDACTED]

From: [REDACTED]
Sent: Wednesday, August 15, 2018 4:17 PM
To: 'Bieger, Tilman' <Tilman.Bieger@dfo-mpo.gc.ca>; Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Cc: [REDACTED]
Subject: RE: Meeting to discuss Grieg NL EEMP

Hi Tilman,

s.19(1)

That sounds good. We'll wait to hear from Heather to set up a time. Thanks for the quick response Tilman.

From: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>

Sent: Wednesday, August 15, 2018 4:15 PM

To: [REDACTED] Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>

Cc: [REDACTED]

Subject: RE: Meeting to discuss Grieg NL EEMP

I am sure that a meeting is possible.

Helen Griffiths (acting as Manager, Fisheries Protection Program – Regulatory Review) is the central contact in our Department for this project at this time – I will ask her to follow up with you and others as appropriate to discuss and arrange a time.

Regards,

Tilman Bieger

A/RD, Ecosystems Management – NL

Acting Director – Oceans Management / Directeur Intérimaire, Gestion des Océans

Ecosystems Management / Gestion des écosystèmes

Fisheries & Oceans Canada / Pêches et Océans Canada

NL Region / Région de Terre Neuve

Office / Bureau (709) 772-8737

Cell / Tél. cellulaire ([REDACTED])

Fax / Télécopieur (709) 772-7862

From: [REDACTED]

Sent: August-15-18 1:13 PM

To: Bieger, Tilman

Cc: [REDACTED]

Subject: Meeting to discuss Grieg NL EEMP

Good afternoon Tilman,

LGL is currently helping Grieg NL prepare the Environmental Effects Monitoring and Follow-up Plan associated with Grieg NL's proposed Placentia Bay aquaculture project. We are hoping to meet with you and/or relevant DFO personnel next week to discuss the EEMP to date. Is such a meeting possible for either the afternoon of Tuesday August 21 or anytime on Wednesday August 22? It is our intention to provide a copy of the EEMP document to you by end of day Monday August 20. Please advise.

Thanks you.

s.16(2)(c)

s.19(1)

LGL Limited
388 Kenmount Road
PO Box 13248, Stn. A
St. John's, NL
A1C 4A5

Office phone: 709-754-1992

Cell phone: [REDACTED]

Fax: 709-754-7718

s.19(1)

No further information has been removed or severed from this page

Keats, Kimberley F

From: Keats, Kimberley F
Sent: 2018–August-24 3:53 PM
To: Griffiths, Helen
Subject: RE: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Hi Helen,

From an FPP perspective, the EEM and Follow-up Plan seems satisfactory. It references compliance with the Aquaculture Activities Regulations, which provide detailed guidance on the Monitoring Protocol for Benthic Substrates under Marine Finfish Farms in Newfoundland and Labrador (Annex 9). Also, the EEM plan is a “living document” and thus, adaptive to unforeseen changes/impacts to VECs that may result from the installation, operation, or decommissioning of the aquaculture project.

I just have a couple of comments/recommendations for your consideration.

A monitoring program is described for blasting operations on land; however, the distance blasting operations are planned from water is not described. It is recommended that the EEM plan include the distance of blasting operations from areas of fish habitat (freshwater and marine) and that the use of explosives will be in accordance with applicable Fisheries and Oceans Canada Guidelines (e.g. Wright and Hopky (1998) and <http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>). While it is briefly mentioned (Table 3b page B-5) that visual observation is planned for “proximate freshwater and marine areas” - if blasting operations are planned near water, the mitigation measures that will be implemented to avoid negative impacts to fish, marine mammals, and sea turtles should be described (e.g. setback distance, measures to dissipate the shock wave (e.g. bubble curtains), whether scarring charges will be used to scare fish from the immediate area, and methods to ensure that marine mammals are not within 500 m of the proposed area).


Section 4.7 – Marine Mammals and Sea Turtles (page 19): To avoid entanglement of marine mammals and sea turtles, sea cage moorings and buoy lines will be inspected regularly to keep tension and avoid loose ropes in the water; however, mitigations planned to avoid entanglement are not mentioned. It is recommended that the EEM plan include the mitigation measures, in addition to tight ropes, planned to avoid entanglement of marine mammals, sea turtles and species at risk.


Kim

From: Griffiths, Helen
Sent: August 22, 2018 9:13 AM
To: Keats, Kimberley F
Subject: FW: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Hi Kim
can you review from FPP perspective, marine-benthic, and provide comments by Monday please?
Thanks

s.19(1)

From: 
Sent: August-21-18 4:33 PM
To: Griffiths, Helen

Cc: [REDACTED]
Subject: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Hi Helen,

Thanks again to you and Roger for meeting with us this afternoon. It was a helpful session. Attached is the EEMP with revised text in Section 4.5, based on Ian Bradbury's comments.

[REDACTED]
[REDACTED]
From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Sent: Monday, August 20, 2018 5:02 PM
To: [REDACTED]
Subject: Re: Draft Grieg NL EEMP - to discuss at meeting at LGL on 21 August @ 14:30

[REDACTED]
Sent from my BlackBerry 10 smartphone on the Bell network.

From: [REDACTED]
Sent: Monday, August 20, 2018 4:57 PM
To: Griffiths, Helen; Bieger, Tilman
Cc: [REDACTED] Johnson, Roger
Subject: Draft Grieg NL EEMP - to discuss at meeting at LGL on 21 August @ 14:30

Hi Helen,

Attached is a draft version of the EEMP associated with Grieg NL's proposed Placentia Bay aquaculture project. The primary reason for providing the draft to DFO is to get feedback and/or direction on the EEMP as it stands at the moment. Obviously it is a document in progress so the 'TBD' designations in the appendix tables are temporary and will be replaced with specific text. Of the monitoring topics given consideration as per the EIS guidelines, 'biological diversity, composition, abundance, distribution, population dynamics, and habitat utilization of fish, marine mammals and seabirds' represents the biggest challenge, as written. It is quite broad brush in nature so monitoring programs associated with this topic require considerable discussion and thought.

Thanks Helen. We'll see you folks tomorrow at 14:30.

[REDACTED] s.19(1)

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca<mailto:Helen.Griffiths@dfo-mpo.gc.ca>>
Sent: Friday, August 17, 2018 11:25 AM
To: [REDACTED] Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca<mailto:Tilman.Bieger@dfo-mpo.gc.ca>>
Cc: [REDACTED]
[REDACTED] Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca<mailto:Roger.Johnson@dfo-mpo.gc.ca>>
Subject: RE: Meeting to discuss Grieg NL EEMP

That's good for us. Anticipate receiving a draft EEMP on Monday.

Thanks
Helen

From: [REDACTED]
Sent: August-17-18 10:49 AM
To: Griffiths, Helen; Bieger, Tilman
Cc: [REDACTED]
Subject: RE: Meeting to discuss Grieg NL EEMP

Hi Helen,

We're proposing to meet with you on Tuesday, August 21 at the LGL office @ 14:30. How does this sound to you?

Thanks.

[REDACTED]
From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca<mailto:Helen.Griffiths@dfo-mpo.gc.ca>>
Sent: Friday, August 17, 2018 8:51 AM
To: [REDACTED]; Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca<mailto:Tilman.Bieger@dfo-mpo.gc.ca>>
Cc: [REDACTED]
Subject: RE: Meeting to discuss Grieg NL EEMP

[REDACTED]
Can you give me a call before 9:30am?

Helen
772-4088

From: [REDACTED]
Sent: August-17-18 7:53 AM
To: Bieger, Tilman; Griffiths, Helen
Cc: [REDACTED]
Subject: RE: Meeting to discuss Grieg NL EEMP

Hello Tilman and Helen,

As a follow-up to Wednesday's emails, a Tuesday afternoon meeting next week would be preferred, if possible. Is there any chance of confirming that meeting time today?

Thanks.

s.19(1)

[REDACTED]
From: [REDACTED]

Sent: Wednesday, August 15, 2018 4:17 PM

To: 'Bieger, Tilman' <Tilman.Bieger@dfo-mpo.gc.ca<mailto:Tilman.Bieger@dfo-mpo.gc.ca>>; Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca<mailto:Helen.Griffiths@dfo-mpo.gc.ca>>

Cc: [REDACTED]

Subject: RE: Meeting to discuss Grieg NL EEMP

Hi Tilman,

That sounds good. We'll wait to hear from Heather to set up a time. Thanks for the quick response Tilman.

From: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca<mailto:Tilman.Bieger@dfo-mpo.gc.ca>>

Sent: Wednesday, August 15, 2018 4:15 PM

To: [REDACTED] Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca<mailto:Helen.Griffiths@dfo-mpo.gc.ca>>

Cc: [REDACTED]

Subject: RE: Meeting to discuss Grieg NL EEMP

I am sure that a meeting is possible.

Helen Griffiths (acting as Manager, Fisheries Protection Program – Regulatory Review) is the central contact in our Department for this project at this time – I will ask her to follow up with you and others as appropriate to discuss and arrange a time.

Regards,

Tilman Bieger

A/RD, Ecosystems Management – NL

Acting Director – Oceans Management | Directeur Intérimaire, Gestion des Océans Ecosystems Management | Gestion des écosystèmes Fisheries & Oceans Canada | Pêches et Océans Canada NL Region | Région de Terre Neuve Office | Bureau (709) 772-8737 Cell | Tél. cellulaire [REDACTED] Fax | Télécopieur (709) 772-7862

From: [REDACTED]

Sent: August-15-18 1:13 PM

To: Bieger, Tilman

Cc: [REDACTED]

Subject: Meeting to discuss Grieg NL EEMP

s.16(2)(c)

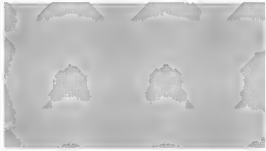
s.19(1)

Good afternoon Tilman,

LGL is currently helping Grieg NL prepare the Environmental Effects Monitoring and Follow-up Plan associated with Grieg NL's proposed Placentia Bay aquaculture project. We are hoping to meet with you and/or relevant DFO personnel next week to discuss the EEMP to date. Is such a meeting possible for either the afternoon of Tuesday August 21 or

anytime on Wednesday August 22? It is our intention to provide a copy of the EEMP document to you by end of day Monday August 20. Please advise.

Thanks you.



LGL Limited
388 Kenmount Road
PO Box 13248, Stn. A
St. John's, NL
A1C 4A5

s.19(1)

Office phone: 709-754-1992
Cell phone: [REDACTED]
Fax: 709-754-7718

White, Terrena

From: Bradbury, Ian R
Sent: August-27-18 5:36 AM
To: Grant, Carole
Subject: FW: Slightly revised Grieg NL EEMP for further distribution within DFO Science
Attachments: Grieg%20NL%20EEMP%20Main%20Body_21August2018_1620.pdf

few comments attached to the PDF.

Again no mention of triploidy testing!!! Also they are now vague about the numbers of rivers to receive counting fences. Its not clear if its two in total or two per BMA.

My talk is this afternoon so may not be accessible from 9:30 Am your time till early afternoon.

Ian

From: Grant, Carole
Sent: Thursday, August 23, 2018 10:36 AM
To: Griffiths, Helen
Cc: Johnson, Roger; Bradbury, Ian R
Subject: RE: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Hi Helen,

I assume either yourself or Roger will be coordinating review of this draft document with other DFO sectors, including other Science folks as Salmonids only be providing comments on sections that pertain to Atlantic salmon?

Carole

From: Griffiths, Helen
Sent: August-22-18 9:12 AM
To: Grant, Carole; Johnson, Roger
Subject: FW: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Hi
revised version. Would it be possible to get comments from you folks by Monday? This is just a draft, and they realize that, so very likely other opportunities to provide input.
Thanks
Helen

s.19(1)

From: [REDACTED]
Sent: August-21-18 4:33 PM
To: Griffiths, Helen
Cc: [REDACTED]
Subject: Slightly revised Grieg NL EEMP for further distribution within DFO Science

Hi Helen,

Thanks again to you and Roger for meeting with us this afternoon. It was a helpful session. Attached is the EEMP with revised text in Section 4.5, based on Ian Bradbury's comments.

[REDACTED]

[REDACTED]

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Sent: Monday, August 20, 2018 5:02 PM
To: [REDACTED]
Subject: Re: Draft Grieg NL EEMP - to discuss at meeting at LGL on 21 August @ 14:30

[REDACTED]

Sent from my BlackBerry 10 smartphone on the Bell network.

From: [REDACTED]
Sent: Monday, August 20, 2018 4:57 PM
To: Griffiths, Helen; Bieger, Tilman
Cc: [REDACTED] Johnson, Roger
Subject: Draft Grieg NL EEMP - to discuss at meeting at LGL on 21 August @ 14:30

Hi Helen,

Attached is a draft version of the EEMP associated with Grieg NL's proposed Placentia Bay aquaculture project. The primary reason for providing the draft to DFO is to get feedback and/or direction on the EEMP as it stands at the moment. Obviously it is a document in progress so the 'TBD' designations in the appendix tables are temporary and will be replaced with specific text. Of the monitoring topics given consideration as per the EIS guidelines, '*biological diversity, composition, abundance, distribution, population dynamics, and habitat utilization of fish, marine mammals and seabirds*' represents the biggest challenge, as written. It is quite broad brush in nature so monitoring programs associated with this topic require considerable discussion and thought.

Thanks Helen. We'll see you folks tomorrow at 14:30.

[REDACTED]

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Sent: Friday, August 17, 2018 11:25 AM
To: [REDACTED] Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>
Cc: [REDACTED] Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: RE: Meeting to discuss Grieg NL EEMP

[REDACTED]

That's good for us. Anticipate receiving a draft EEMP on Monday.

Thanks
Helen

s.19(1)

From: [REDACTED]
Sent: August-17-18 10:49 AM
To: Griffiths, Helen; Bieger, Tilman
Cc: [REDACTED]
Subject: RE: Meeting to discuss Grieg NL EEMP

Hi Helen,

We're proposing to meet with you on Tuesday, August 21 at the LGL office @ 14:30. How does this sound to you?

Thanks.

From: Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>

Sent: Friday, August 17, 2018 8:51 AM

To: [REDACTED] Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>

Cc: [REDACTED]

Subject: RE: Meeting to discuss Grieg NL EEMP

[REDACTED]
Can you give me a call before 9:30am?

Helen

772-4088

From: [REDACTED]

Sent: August-17-18 7:53 AM

To: Bieger, Tilman; Griffiths, Helen

Cc: [REDACTED]

Subject: RE: Meeting to discuss Grieg NL EEMP

Hello Tilman and Helen,

As a follow-up to Wednesday's emails, a Tuesday afternoon meeting next week would be preferred, if possible. Is there any chance of confirming that meeting time today?

Thanks.

[REDACTED]
From: [REDACTED]

Sent: Wednesday, August 15, 2018 4:17 PM

To: 'Bieger, Tilman' <Tilman.Bieger@dfo-mpo.gc.ca>; Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>

Cc: [REDACTED]

Subject: RE: Meeting to discuss Grieg NL EEMP

s.19(1)

Hi Tilman,

That sounds good. We'll wait to hear from Heather to set up a time. Thanks for the quick response Tilman.

[REDACTED]
From: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>

Sent: Wednesday, August 15, 2018 4:15 PM

To: [REDACTED] Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>

Cc: [REDACTED]

Subject: RE: Meeting to discuss Grieg NL EEMP

[REDACTED]

I am sure that a meeting is possible.

Helen Griffiths (acting as Manager, Fisheries Protection Program – Regulatory Review) is the central contact in our Department for this project at this time – I will ask her to follow up with you and others as appropriate to discuss and arrange a time.

Regards,

Tilman Bieger

A/RD, Ecosystems Management – NL

Acting Director – Oceans Management / Directeur Intérimaire, Gestion des Océans

Ecosystems Management / Gestion des écosystèmes

Fisheries & Oceans Canada / Pêches et Océans Canada

NL Region / Région de Terre Neuve

Office / Bureau (709) 772-8737

Cell / Tél. cellulaire [REDACTED]

Fax / Télécopieur (709) 772-7862

From: [REDACTED]

Sent: August-15-18 1:13 PM

To: Bieger, Tilman

Cc: [REDACTED]

Subject: Meeting to discuss Grieg NL EEMP

Good afternoon Tilman,

LGL is currently helping Grieg NL prepare the Environmental Effects Monitoring and Follow-up Plan associated with Grieg NL's proposed Placentia Bay aquaculture project. We are hoping to meet with you and/or relevant DFO personnel next week to discuss the EEMP to date. Is such a meeting possible for either the afternoon of Tuesday August 21 or anytime on Wednesday August 22? It is our intention to provide a copy of the EEMP document to you by end of day Monday August 20. Please advise.

Thanks you.

[REDACTED]

[REDACTED]

s.16(2)(c)

s.19(1)

LGL Limited
388 Kenmount Road
PO Box 13248, Stn. A
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A1C 4A5

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Fax: 709-754-7718

s.19(1)

No further information has been removed or severed from this page

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are duplicates of
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pages 1935 to / à 2005**

Griffiths, Helen

From: Griffiths, Helen
Sent: August-28-18 9:26 AM
To: Cochrane, Kim
Subject: RE: Weekly MINO call with RDG - Wednesday

Grieg NL Placentia Bay Project Environmental Assessment (UPDATE)

The NL Department of Municipal Affairs and Environment (MAE) is carrying out an environmental assessment (EA) of a large aquaculture project proposed by Grieg NL in Placentia. DFO is participating in the provincial EA Committee along with other federal and provincial authorities. There has been public and media discussion about the project, and stakeholder groups have submitted input critical of the EIS.

The Department has provided advice/comments to the EA based on a DFO science advisory process that examined the EIS (which is expected to be published in the coming weeks). Advice included recommendations about describing impacts of possible escapes of farmed fish, and the measures to be followed to ensure the fish to be farmed are sterile. The Department has advised the Province that these and other recommendations by DFO can be addressed in the regulatory phase of the project. This is consistent with decisions DFO and ECCC made about this project in 2016.

The provincial Minister was scheduled to make a decision about the EA for the project on July 31, however, to date, no decision has been made. The Provincial EA Committee Chair provided the draft EIS recommendation for the Minister of Municipal Affairs and Environment to DFO for review on August 22 to ensure all references to DFO comments are reflected accurately.

Opponents of the aquaculture industry would criticize a decision by the provincial Minister of MAE to release the project from EA, and could question how DFO scientific advice on the project will be addressed.

Draft media lines have been prepared in the event that DFO receives inquiries on this issue.

Regional officials will continue to liaise with provincial officials to support their efforts to have the EA decision appropriately incorporate and respond to DFO advice.

From: Cochrane, Kim
Sent: August-28-18 9:02 AM
To: Griffiths, Helen
Subject: RE: Weekly MINO call with RDG - Wednesday

They are for the DGs

From: Griffiths, Helen
Sent: August-28-18 9:02 AM
To: Cochrane, Kim
Subject: RE: Weekly MINO call with RDG - Wednesday

Are the weekly AES reports for MINO or DM?

Bieger, Tilman

From: Bieger, Tilman
Sent: August-28-18 11:50 AM
To: Cochrane, Kim
Subject: RE: Weekly MINO call with RDG - Wednesday

EM items to offer to RDG for call with MINO:

Grieg Aquaculture project

- Provincial environmental assessment officials are finalizing advice to their Minister on the Environmental Impact Statement EIS for the project.
- The Province may make a decision on the project in the coming week ([REDACTED])
- DFO provided advice to Province on the EIS informed by a CSAS process which contained a number of criticisms of the EIS (and which is expected to be published in the coming weeks).
- Overall however the Department advised the Province that issues raised can be addressed in the regulatory phase of the project (consistent with decisions DFO and ECCC made about this project in 2016).
- Regional officials continue to liaise with provincial officials to support their efforts to have the EA decision appropriately incorporate and respond to DFO advice.

Escape of salmon from Hermitage

- Efforts to recapture some ~2000-3000 escaped salmon remain suspended after a humpback became entangled in nets week before last
- C&P conducting patrols this week to assess for escaped salmon and marine mammals in area

Infectious Salmon Anemia outbreak at Marine Harvest Canada on south coast

- Site has been depopulated (close to 500,000 fish suspected of being infected have been killed and disposed) and site quarantined

Expected announcement by C-NLOPB of Call for Nomination

- The Canada –NL Offshore Petroleum Board is expecting to announce this week a call for industry to nominate additional areas where they would like to see oil & gas exploration licences made available in a “sector” offshore of eastern Nfld
- The sector for which nominations will be sought is mostly outside of the Canadian EEZ, and includes an area where NAFO has implemented closures against bottom contact fishing.
- The sector was established in 2015 and already contains a previously issued exploration licence.
- Regional DFO personnel are preparing to communicate this info to NAFO in accordance with protocols for sharing information.

s.14

From: Cochrane, Kim
Sent: August-27-18 9:35 AM
To: Sooley, Darrin; Johnson, Roger; Tulk, Kirby; Griffiths, Helen; Bieger, Tilman
Cc: Pike, Kelly J
Subject: Weekly MINO call with RDG - Wednesday

s.21(1)(a)

s.21(1)(b)

Please advise if you have any items to flag for this meeting.

Thank you,

Kim

Kim Cochrane

Manager, Program Services

Ecosystems Management Branch / Direction de la gestion des écosystèmes

Fisheries and Oceans Canada / Pêches et Océans Canada

Northwest Atlantic Fisheries Centre / Centre des pêches de l'Atlantique nord-ouest

PO Box 5667, 80 East White Hills Road / CP 5667 80, chemin White Hills est

St. John's NL A1C 5X1 / Saint-Jean T-N-L A1C 5X1

Phone: 709-772-7832

kim.cochrane@dfo-mpo.gc.ca

No information has been removed or severed from this page

White, Terrena

From: Ian Bradbury [REDACTED]
Sent: August-29-18 6:37 AM
To: Grant, Carole
Subject: Comments

Updated comments on the PDF.

Ian

Section 2.1 Page 6. Consideration should also be given to the level of triploidy success achieved and maintained throughout the production cycle.

Table 1. Page 7. Induction or proportion of triploid prior to transport to sea cages here. This has been identified previously as part of the 2016 CSAS as a critical component. Robust testing for levels of triploidy should be completed prior to transfer to NL and again before transfer to sea cages in Placentia Bay

Section 3.2.2 Page 14. Monitoring for fish health states that triploids will be monitored for health parameters, this requires confirmation that monitored individuals are triploid such that data can be interpreted correctly.

In conjunction with health checks at each stage, samples of sufficient size to be statistically robust should be taken and tested for triploid status and proportion. The uncertainty regarding the performance of triploid individuals in NL waters can be thus be evaluated using this data.

Section 4.5 Page 18. Wild Atlantic salmon. The primary concern is not interbreeding given most of these individuals will be triploid. The primary concern is ecological and indirect interactions. This can still affect the genetic integrity of wild salmon stocks, and the potentially transfer disease and parasites wild salmon.

The document states: Grieg NL will work with DFO to establish counting fences in at least two rivers proximate to each active BMA.

How many fences are being proposed to be active in a given year? Details regarding these facilities, their operation and maintenance are required.

s.19(1)

Also the document states: “If routine monitoring results in a lack of evidence supporting the use of salmon rivers by Grieg NL farm salmon, then the routine monitoring will be ended after a suitable time frame determined through consultation with DFO.”

This is counter to the main purpose of these facilities which is to monitor salmon abundance and fish health. These metrics are not dependent on escape events.

Document states: If the presence of farmed salmon in the rivers is detected but the farmed fish are not from Grieg NL operations, then the responsibility of routine monitoring should be shifted to the source farm.

This requires some system of traceability such that these fish could be assigned to another producer, capacity does not exist for this at the moment.

Appendix B Page B-22 – What does genetic integrity mean? This is vague and unclear

Number of rivers to be monitored per BMA needs to be specified here

18.1 – other ecological metrics should be monitored as well, blood samples are not appropriate

White, Terrena

From: Grant, Carole
Sent: August-29-18 10:39 AM
To: Griffiths, Helen
Cc: Bradbury, Ian R
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: Grieg NL EEMP Salmonids Comments - Aug 27, 2018.pdf

Helen,

Please see attached comments from Salmonids.

If you have any questions or wish to discuss, please let me know.

Carole

From: Griffiths, Helen
Sent: August-28-18 9:35 AM
To: Grant, Carole
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project

Hi Carole

Any further comments from you or Ian? We provided them with comments from Ian first time around

From: Griffiths, Helen
Sent: August-23-18 10:27 AM
To: Hendry, Christopher; Grant, Carole; Johnson, Roger
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project

Folks

Only received this yesterday afternoon at 330pm, so I notified Joanne that both Chris and Carole are out of the office, and not to expect a response until Monday, earliest. She just calls me to tell me that this document is moving very fast within the province, and suggested that I send any comments by noon today. I'll have a look, based on my level of knowledge of this file.....point made I trust.

Roger, any chance you can have a quick look at the relevant sections? Anywhere DFO comments show up

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: August-22-18 3:44 PM
To: Hanchar, Dorothea; Ficzer, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
Cc: Squires, Susan
Subject: Placentia Bay Atlantic Salmon Aquaculture Project

Good Afternoon,

Thank you for your participation in the EIS review for the above-noted project. I've attached the minister's EIS recommendation for your review. Please let me know asap if there are any glaring omissions or necessary revisions.

Feel free to call me at 729-2822 if you wish to discuss.

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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pages 1935 to / à 2005**

Johnson, Roger

From: Hendry, Christopher
Sent: Thursday, August 30, 2018 8:59 AM
To: Johnson, Roger
Subject: FW: QP update
Attachments: Aquaculture General-August 29 2018.docx

Some comments tracked

From: Medeiros, Dean
Sent: August-29-18 6:19 PM
To: Hendry, Christopher
Cc: Johnson, Roger
Subject: FW: QP update

Hi Chris,

Attached is the latest QP note, which we have been asked to update.

Could you please ensure the Grieg component is up-to-date (in tracked changes please)?

Thanks,
Dean

Dean Medeiros
A/Director | Directeur (par intérim)
Aquaculture Policy | Politiques de l'aquaculture
Aquatic Ecosystems Sector | Secteur des écosystèmes aquatiques
Fisheries and Oceans Canada | Pêches et Océans Canada
200 Kent - Ottawa, ON - K1A 0E6
Dean.Medeiros@dfo-mpo.gc.ca
Telephone | Téléphone (613) 301-1904
Facsimile | Télécopieur (613) 993-9574
<http://www.dfo-mpo.gc.ca/aquaculture/aquaculture-eng.html>
><((((" > ., ^ ., ><((((" > ., ^ ., ><((((" >

From: Paquette, Michael
Sent: Tuesday, August 28, 2018 3:55 PM
To: Medeiros, Dean <Dean.Medeiros@dfo-mpo.gc.ca>; Struthers, Alistair <Alistair.Struthers@dfo-mpo.gc.ca>
Cc: Williams, Darren <Darren.Williams@dfo-mpo.gc.ca>; Campbell, John P. <John.Campbell@dfo-mpo.gc.ca>; Nielsen, Ingrid <Ingrid.Nielsen@dfo-mpo.gc.ca>; Kennedy, Lori <Lori.Kennedy@dfo-mpo.gc.ca>; Beckford, Ebonie <Ebonie.Beckford@dfo-mpo.gc.ca>
Subject: FW: QP update
Importance: High

Alistair / Dean,

With the house returning in September we need to update our QP's. Please have your teams make the necessary updates to the attached notes and have them translated. **Director approved notes are due back to me by COB Wednesday September 5th**

Michael Paquette
Aquaculture Management Directorate
10N192
613-991-0255

From: Villeneuve, Anne-Marie
Sent: August-28-18 2:43 PM
To: Ramgulam, Jim; Paquette, Michael; Nguyen, Anthony; Dieudonné, Rylene
Cc: Star, Christine; Kennedy, Lori; Daspe, Caroline
Subject: QP update

Hi,
In light of the house sitting again in September, it is now time to update your QP notes.

Due to ADMO 4:00 pm Sept 7
Thanks

Anne-Marie Villeneuve
Manager, Correspondence and Briefing/
Gestionnaire, Services de correspondance et des affaires
Aquatic Ecosystems Sector/Secteur des écosystèmes aquatiques
Fisheries and Oceans Canada/Pêches et océans Canada
200 Kent Street – 10th Floor/ 200, rue Kent – 10^{ième} étage
Ottawa, ON K1A 0E6
Tel:613-990-7063
Anne-Marie.villeneuve@dfo-mpo.gc.ca

TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS

SECRET

#	ISSUE /PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
Aquatic Ecosystems Sector / Secteur des écosystèmes aquatiques Septemebr 3 to September 14 / du 3 septembre au 14 septembre				
	Escape of aquaculture salmon near Hermitage, NL (UPDATE)	<p>Cold Ocean Salmon (subsidiary of Cooke Aquaculture) has reported the escape of some 2000-3000 salmon (3-5 lbs each) from a marine cage site near Hermitage on the south coast of Newfoundland between July 27-29. This is the first large-scale escape of farmed salmon reported in NL since 2013.</p> <p>The Department has directed the company to take measures to recapture the fish, with precautions to avoid impacts to wild salmon that may be in the area. DFO Fishery Officers and Guardians are overseeing company efforts. DFO Science personnel have also recaptured some fish. As of August 14, 400 fish have been recaptured.</p> <p>On August 14, a humpback whale became entangled in one of the gillnets. DFO directed that all gillnetting activity immediately cease and the whale was freed later that day.</p> <p>During patrols conducted August 22, 2018; 2 whales and approximately 200 dolphins were sighted in the area, it was decided recapture efforts would continue to be suspended until these marine mammals moved out of area.</p> <p>The company advises there is no risk (such as from drug residues) to humans should they consume escaped fish.</p> <p>Some media coverage has inaccurately depicted a lack of coordination between federal and provincial authorities on this issue.</p>	<p>Opponents to aquaculture are criticizing the industry for this incident and calling into question containment capabilities. They will emphasize the possibility of impacts to wild salmon (including through interbreeding).</p> <p>Media attention on this issue could be relevant to the ongoing provincial environmental assessment of a large new aquaculture project in Placentia Bay proposed by Grieg NL.</p>	<p>The Region is monitoring marine mammal and salmon activity to determine when gillnetting can resume.</p> <p>The Department will work with the Province in the coming months to review the incident, the adequacy of the company's response, and the measures in place to avoid these incidents.</p> <p>Regional personnel will continue working with NHQ to respond to media inquiries.</p>

**TAB 10 - UPCOMING ISSUES AND DECISIONS /
ONGLET 10 - PROCHAINS ENJEUX ET DÉCISIONS**

SECRET

#	ISSUE / PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
		<p>The Region</p> <p>clarified roles in an interview with the CBC Broadcast.</p> <p>The NL Department of Municipal Affairs and Environment (MAE) is carrying out an environmental assessment (EA) of a large aquaculture project proposed by Grieg NL in Placentia. DFO is participating in the provincial EA Committee along with other federal and provincial authorities. There has been public and media discussion about the project, and stakeholder groups have submitted input critical of the EIS.</p> <p>The Department has provided advice/comments to the EA based on a DFO science advisory process that examined the EIS (which is expected to be published in the coming weeks). Advice included recommendations about describing impacts of possible escapes of farmed fish, and the measures to be followed to ensure the fish to be farmed are sterile. The Department has advised the Province that these and other recommendations by DFO can be addressed in the regulatory phase of the project. This is consistent with decisions DFO and ECCC made about this project in 2016.</p> <p>The provincial Minister was scheduled to make a decision about the EA for the project on July 31, however, to date, no decision has been made. The Provincial EA Committee Chair provided the draft EIS recommendation for the Minister of Municipal Affairs and Environment to DFO for review on August 22 to ensure all references to DFO comments are reflected accurately.</p>	<p>Opponents of the aquaculture industry would criticize a decision by the provincial Minister of MAE to release the project from EA, and could question how DFO scientific advice on the project will be addressed.</p> <p>Draft media lines have been prepared in the event that DFO receives inquiries on this issue.</p> <p>Regional officials will continue to liaise with provincial officials to support their efforts to have the EA decision appropriately incorporate and respond to DFO advice.</p>	
	Grieg NL Placentia Bay Project Environmental Assessment (UPDATE)			

Jacqueline Perry

Approved by: **Jacqueline Perry**
Acting Regional Director General
Newfoundland & Labrador Region
Date: **AUG 24 2016**

R. D. Finn

Approved by:
R. D. Finn Regional Director
Ecosystems Management
AUG 24 2016

s.14
s.21(1)(b)

Bieger, Tilman

From: Bieger, Tilman
Sent: August-30-18 12:56 PM
To: Pike, Kelly J
Cc: Griffiths, Helen; Snow, Stephen; Park, Laura
Subject: FW: Week of September 3rd - AES Issues, Reports and Consultations Report / Upcoming Decisions
Attachments: AES for September 3.docx

Unless we get input from others I recommend we go forward with just the two items in attached for this week.

From: Pike, Kelly J
Sent: August-29-18 2:29 PM
To: Bieger, Tilman; Griffiths, Helen; Tulk, Kirby; Johnson, Roger; Sooley, Darrin
Subject: FW: Week of September 3rd - AES Issues, Reports and Consultations Report / Upcoming Decisions

Please reply by COB August 30, 2018. A "NIL" response is required.

From: Genier, Sylvie
Sent: Wednesday, August 29, 2018 2:25 PM
To: Butler, Annette <Annette.Butler@dfo-mpo.gc.ca>; Cochrane, Kim <Kim.Cochrane@dfo-mpo.gc.ca>; Hickson, Cindy <Cindy.Hickson@dfo-mpo.gc.ca>; Rossignol, Pauline <Pauline.Rossignol@dfo-mpo.gc.ca>; Wilson, Teresa M <Teresa.Wilson@dfo-mpo.gc.ca>; XCA-Grp, RDGO <XCA-Grp-RDGO@dfo-mpo.gc.ca>; Johal, Sharan <Sharan.Johal@dfo-mpo.gc.ca>; Hébert, Linda M <Linda.Hebert@dfo-mpo.gc.ca>; Pallard, Jessica <Jessica.Pallard@dfo-mpo.gc.ca>; Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Couturier-Dubé, Geneviève <Genevieve.Couturier-Dube@dfo-mpo.gc.ca>; Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Landry, Anne <Anne.Landry@dfo-mpo.gc.ca>
Cc: Daspe, Caroline <Caroline.Daspe@dfo-mpo.gc.ca>
Subject: Week of September 3rd - AES Issues, Reports and Consultations Report / Upcoming Decisions

Hi all / Bonjour,

Please note due date due to Holiday on Monday / SVP noter la date dû à cause de la journée fériée lundi

**Please note this request is for items pertaining to Aquatic Ecosystems Sector only /
Veuillez noter que cette demande concerne uniquement les articles appartenant au secteur des écosystèmes aquatiques**

Please update (in the language of your choice) the attached report with a regional perspective and return to me **by 3pm on Friday, August 31st (Eastern Time).**

Please note if no response is received by the timeline provided, it will be considered a NIL response.

Please note this request is for the period of September 10th to September 21st

Veuillez fournir vos données (dans la langue de votre choix), incluant la perspective régionale pour le rapport ci-joint **par 15h00 vendredi le 31 août. (heure de l'est).**

S'il vous plaît noter si aucune réponse n'est reçue par le temps fourni, il sera considéré comme une réponse NUL.

SVP noter que cette demande est pour la période du 10 septembre au 21 septembre

Thank you/Merci.

Sylvie Genier

Scheduling Coordinator / Coordinatrice de l'agenda

Senior Assistant Deputy Minister / Bureau du sous-ministre adjoint

Ecosystems & Fisheries Management / Écosystèmes et Gestion de Pêches

613-993-2734

=====

Guidelines for Issues, Reports & Consultations report / Lignes directrices pour le rapport d'enjeux, de rapports et de consultations:

Issues expected for the next two weeks (from September 10 – September 21, 2018)

Enjeux prévus pour les prochaines deux semaines (à partir du 10 septembre – 21 septembre 2018)

Anticipated reports, studies, publications, etc. Please identify any reports expected for public release whether they are from DFO or from others but with implications for DFO (to be released before **September 21, 2018**).

Rapports anticipés, études, publications, etc. Veuillez identifier tous les rapports en attente pour publication - même s'il s'agit d'un rapport du MPO ou provenant d'autres organismes avec des implications pour le MPO (date de publication avant le **21 septembre 2018**).

Meetings/consultation planned for September 10 – September 21, 2018

Rencontres/consultations prévues pendant la période à partir du 10 septembre – 21 septembre 2018

Please provide **ONLY** information that the Minister and/or Minister's Office should be made aware of because of the potential for it to attract public or media attention. For issues, please explain why it is an issue, anticipated reaction and plans to manage the reaction. Please ensure your input is signed off by your DMB member.

When you transmit the info, please indicate which issues, reports or consultations should be included in the Week at a Glance - these are the same issues that the Commissioner or SADM will be raising during the Round Table.

Veuillez fournir uniquement les renseignements dont le ministre ou le bureau du ministre devraient prendre connaissance parce qu'ils peuvent potentiellement attirer l'attention du public ou des médias. En ce qui concerne les enjeux, veuillez expliquer pourquoi il s'agit d'un enjeu, quelle est la réaction anticipée et quels sont les plans devant servir à gérer cette réaction. Veuillez-vous assurer que votre contribution est signée par votre membre du Conseil du ministère.

Lorsque vous transmettez les renseignements, veuillez indiquer quels enjeux, rapports ou consultations devraient être inclus dans le Coup d'œil sur la semaine – ceux-ci correspondent aux enjeux que le Commissaire ou le Sous-ministre adjoint principal soulèveront durant la table-ronde.

TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS

SECRET

#	ISSUE /PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
Aquatic Ecosystems Sector / Secteur des écosystèmes aquatiques – September 3rd to September 14th / du 3 septembre au 14 septembre				
1	UPDATE Grieg NL Placentia Bay Project	<p>The NL Department of Municipal Affairs and Environment (MAE) is carrying out an environmental assessment (EA) of a large aquaculture project proposed by Grieg NL in Placentia. DFO is participating in the provincial EA Committee along with other federal and provincial authorities. There has been public and media discussion about the project, and stakeholder groups have submitted input critical of the Environmental Impact Statement (EIS).</p> <p>The Department has provided advice/comments to the EA based on a DFO science advisory process that examined the EIS (which is expected to be published in the coming weeks). Advice included recommendations about describing impacts of possible escapes of farmed fish, and the measures to be followed to ensure the fish to be farmed are sterile. The Department has advised the Province that these and other recommendations can be addressed in the regulatory phase of the project. This is consistent with decisions DFO and ECCC made about this project in 2016.</p> <p>The provincial Minister was scheduled to make a decision about the EA for the project on July 31, however, to date, no decision has been made.</p>	<p>Opponents of the aquaculture industry would criticize a decision by the provincial Minister of MAE to release the project from EA, and could question how DFO scientific advice on the project will be addressed.</p>	<p>Draft media lines have been prepared in the event that DFO receives inquiries on this issue.</p> <p>Regional officials will continue to liaise with provincial officials to support their efforts to have the EA decision appropriately incorporate and respond to DFO advice.</p>
2	Call for Nominations for petroleum exploration areas offshore of	<p>The Canada –NL Offshore Petroleum Board (C-NLOPB) is preparing to announce (possibly in the week of August 27) a Call for Nominations in an area, known as a “sector”, east of Newfoundland. This will provide an opportunity for companies to identify areas where they may be interested in bidding on exploration licences. The sector was established in 2015, is mostly outside of the Canadian 200-mile EEZ, and</p>	<p>The action by the C-NLOPB has no direct impact on any area the Department is counting towards marine conservation targets.</p> <p>Environmental and fishery groups, including NAFO, could criticize actions</p>	<p>Departmental personnel are preparing to share information about the C-NLOPB action to NAFO as per established protocols.</p>

TAB 10 - UPCOMING ISSUES AND DECISIONS /
ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS

SECRET

#	ISSUE / PROBLÈME Newfoundland	DESCRIPTION	IMPACT / EFFET by the C-NLOPB to promote further oil and gas exploration in areas where measures to protect benthic from harm by fishing have been implemented.	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
		contains one exploration licence already. The sector and the existing licence overlap an area closed to bottom contact fishing by the Northwest Atlantic Fishery Organization to protect sponges and seapens. The sector does not overlap with any areas that the Department has formally protected or is planning to protect inside of the EEZ.		
		This action is part of the regular scheduled land tenure process of the C-NLOPB.		

Bieger, Tilman

From: Bieger, Tilman
Sent: August-31-18 10:16 AM
To: Johnson, Roger
Subject: RE: Aquaculture QP update

I haven't heard anything back from RDGO so you are clear to forward.

From: Johnson, Roger
Sent: August-31-18 9:59 AM
To: Bieger, Tilman
Subject: RE: Aquaculture QP update

Please advise when/if I can send this to the original requestor – like to get it off the books before weekend

From: Bieger, Tilman
Sent: Thursday, August 30, 2018 1:30 PM
To: Perry, Jacqueline <Jacqueline.Perry@dfo-mpo.gc.ca>; Butler, Annette <Annette.Butler@dfo-mpo.gc.ca>; Abbass, Lily <Lily.Abbass@dfo-mpo.gc.ca>
Cc: Finn, Ray <Ray.Finn@dfo-mpo.gc.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: FW: Aquaculture QP update

FYI attached a national QP note on aquaculture

We are recommending some update to the text in it related to the Grieg project (updated wording pasted below)

If pressed on Grieg NL aquaculture:

- After a thorough scientific review, Fisheries and Oceans Canada in 2015 approved a proposal by Grieg Newfoundland Salmon Ltd to import triploid European-origin salmon eggs for aquaculture in Newfoundland and Labrador.
- Scientists from DFO and other agencies conducted a thorough peer-review of available data on sterile, triploid fish and determined that risks to the conservation of wild salmon are low.
- No import of eggs will occur until all requisite federal and provincial review processes and authorizations for this project are completed.
- The role of DFO, under the *Fisheries Act*, is to ensure that aquaculture is sustainably managed across the country. However, approval of the Grieg project lies with the Province of Newfoundland and Labrador.

- Fisheries and Oceans has provided advice to the Province of Newfoundland and Labrador as part of the environment assessment the Province is carrying out for the project. Should the project proceed, the Department will continue to work with the Province and Grieg NL to ensure that precautionary and monitoring measures related to the aquatic environment are properly developed and implemented.

From: Johnson, Roger
Sent: August-30-18 1:02 PM
To: Bieger, Tilman
Subject: RE: QP update

Your wording is good – only slightly different than what Chris and I had drafted. I would not add a lot more as this seems to be a small piece of a larger pie.

From: Bieger, Tilman
Sent: Thursday, August 30, 2018 11:52 AM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: FW: QP update

Thanks

The text on Grieg seems a little dated

I suggest we update and have made a start. Pls review including the date for the egg importation decision

Before forwarding pls let me see so we can keep RDGO in the loop

From: Johnson, Roger
Sent: August-30-18 9:10 AM
To: Bieger, Tilman
Subject: FW: QP update

Do you need to see my response to this before I send it.

Still not sure of hierarchy LOL

From: Medeiros, Dean
Sent: Wednesday, August 29, 2018 6:19 PM
To: Hendry, Christopher <Christopher.Hendry@dfo-mpo.gc.ca>
Cc: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: FW: QP update

Hi Chris,

Attached is the latest QP note, which we have been asked to update.

Could you please ensure the Grieg component is up-to-date (in tracked changes please)?

Thanks,
Dean

Dean Medeiros
A/Director | Directeur (par intérim)
Aquaculture Policy | Politiques de l'aquaculture
Aquatic Ecosystems Sector | Secteur des écosystèmes aquatiques
Fisheries and Oceans Canada | Pêches et Océans Canada
200 Kent - Ottawa, ON - K1A 0E6
Dean.Medeiros@dfo-mpo.gc.ca
Telephone | Téléphone (613) 301-1904
Facsimile | Télécopieur (613) 993-9574
<http://www.dfo-mpo.gc.ca/aquaculture/aquaculture-eng.html>
>((((> ,.,~.,.,>((((> ,.,~.,.,>((((>

From: Paquette, Michael
Sent: Tuesday, August 28, 2018 3:55 PM
To: Medeiros, Dean <Dean.Medeiros@dfo-mpo.gc.ca>; Struthers, Alistair <Alistair.Struthers@dfo-mpo.gc.ca>
Cc: Williams, Darren <Darren.Williams@dfo-mpo.gc.ca>; Campbell, John P. <John.Campbell@dfo-mpo.gc.ca>; Nielsen, Ingrid <Ingrid.Nielsen@dfo-mpo.gc.ca>; Kennedy, Lori <Lori.Kennedy@dfo-mpo.gc.ca>; Beckford, Ebonie <Ebonie.Beckford@dfo-mpo.gc.ca>
Subject: FW: QP update
Importance: High

Alistair / Dean,

With the house returning in September we need to update our QP's. Please have your teams make the necessary updates to the attached notes and have them translated. **Director approved notes are due back to me by COB Wednesday September 5th**

Michael Paquette
Aquaculture Management Directorate
10N192
613-991-0255

From: Villeneuve, Anne-Marie
Sent: August-28-18 2:43 PM
To: Ramgulam, Jim; Paquette, Michael; Nguyen, Anthony; Dieudonné, Rilene
Cc: Star, Christine; Kennedy, Lori; Daspe, Caroline
Subject: QP update

Hi,
In light of the house sitting again in September, it is now time to update your QP notes.

Due to ADMO 4:00 pm Sept 7
Thanks

Anne-Marie Villeneuve

Manager, Correspondence and Briefing/
Gestionnaire, Services de correspondance et des affaires
Aquatic Ecosystems Sector/Secteur des écosystèmes aquatiques
Fisheries and Oceans Canada/Pêches et océans Canada
200 Kent Street – 10th Floor/ 200, rue Kent – 10^{ième} étage
Ottawa, ON K1A 0E6
Tel: 613-990-7063
Anne-Marie.villeneuve@dfo-mpo.gc.ca

No information has been removed or severed from this page

Pike, Kelly J

From: Pike, Kelly J
Sent: Friday, August 31, 2018 2:58 PM
To: Genier, Sylvie
Cc: Butler, Annette; Cochrane, Kim; Pike, Kelly J
Subject: RE: Week of September 3rd - AES Issues, Reports and Consultations Report / Upcoming Decisions
Attachments: AES for September 3 (2).docx; RDG Approval - Issues Report - Ecosystems Management - August 31, 2018.pdf

Good afternoon,
Please see the attached report for Ecosystems Management, NL Region.

Charlene for

Kelly Pike
Administrative Officer, Ecosystems Management
Regional Director's Office
Fisheries and Oceans Canada/Government of Canada
80 East White Hills Road, PO Box 5667
St. John's, NL A1C 5X1
Kelly.Pike@dfo-mpo.gc.ca /Tel: 709 772-7894/Fax: 709 772-7862/Cell: [REDACTED]

From: Genier, Sylvie
Sent: Wednesday, August 29, 2018 2:25 PM
To: Butler, Annette <Annette.Butler@dfo-mpo.gc.ca>; Cochrane, Kim <Kim.Cochrane@dfo-mpo.gc.ca>; Hickson, Cindy <Cindy.Hickson@dfo-mpo.gc.ca>; Rossignol, Pauline <Pauline.Rossignol@dfo-mpo.gc.ca>; Wilson, Teresa M <Teresa.Wilson@dfo-mpo.gc.ca>; XCA-Grp, RDGO <XCA-Grp-RDGO@dfo-mpo.gc.ca>; Johal, Sharan <Sharan.Johal@dfo-mpo.gc.ca>; Hébert, Linda M <Linda.Hebert@dfo-mpo.gc.ca>; Pallard, Jessica <Jessica.Pallard@dfo-mpo.gc.ca>; Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Couturier-Dubé, Geneviève <Genevieve.Couturier-Dube@dfo-mpo.gc.ca>; Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Landry, Anne <Anne.Landry@dfo-mpo.gc.ca>
Cc: Daspe, Caroline <Caroline.Daspe@dfo-mpo.gc.ca>
Subject: Week of September 3rd - AES Issues, Reports and Consultations Report / Upcoming Decisions

Hi all / Bonjour,

Please note due date due to Holiday on Monday / SVP noter la date dû à cause de la journée fériée lundi

**Please note this request is for items pertaining to Aquatic Ecosystems Sector only /
Veuillez noter que cette demande concerne uniquement les articles appartenant au secteur des écosystèmes aquatiques**

Please update (in the language of your choice) the attached report with a regional perspective and return to me **by 3pm on Friday, August 31st (Eastern Time).**

s.16(2)(c)

Please note if no response is received by the timeline provided, it will be considered a NIL response.

Please note this request is for the period of September 10th to September 21st

Veuillez fournir vos données (dans la langue de votre choix), incluant la perspective régionale pour le rapport ci-joint **par 15h00 vendredi le 31 août. (heure de l'est).**

S'il vous plaît noter si aucune réponse n'est reçue par le temps fourni, il sera considéré comme une réponse NUL.

SVP noter que cette demande est pour la période du 10 septembre au 21 septembre

Thank you/Merci.

Sylvie Genier

Scheduling Coordinator / Coordinatrice de l'agenda

Senior Assistant Deputy Minister / Bureau du sous-ministre adjoint

Ecosystems & Fisheries Management / Écosystèmes et Gestion de Pêches

613-993-2734

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Guidelines for Issues, Reports & Consultations report / Lignes directrices pour le rapport d'enjeux, de rapports et de consultations:

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Lorsque vous transmettez les renseignements, veuillez indiquer quels enjeux, rapports ou consultations devraient être inclus dans le Coup d'œil sur la semaine – ceux-ci correspondent aux enjeux que le Commissaire ou le Sous-ministre adjoint principal soulèveront durant la table-ronde.

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TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS

SECRET

#	ISSUE /PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
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Aquatic Ecosystems Sector / Secteur des écosystèmes aquatiques – September 3rd to September 14th / du 3 septembre au 14 septembre

1	UPDATE Grieg NL Placentia Bay Project	<p>The NL Department of Municipal Affairs and Environment (MAE) is carrying out an environmental assessment (EA) of a large aquaculture project proposed by Grieg NL in Placentia. DFO is participating in the provincial EA Committee along with other federal and provincial authorities. There has been public and media discussion about the project, and stakeholder groups have submitted input critical of the Environmental Impact Statement (EIS).</p> <p>The Department has provided advice/comments to the EA based on a DFO science advisory process that examined the EIS (which is expected to be published in the coming weeks). Advice included recommendations about describing impacts of possible escapes of farmed fish, and the measures to be followed to ensure the fish to be farmed are sterile. The Department has advised the Province that these and other recommendations can be addressed in the regulatory phase of the project. This is consistent with decisions DFO and ECCC made about this project in 2016.</p> <p>The provincial Minister was scheduled to make a decision about the EA for the project on July 31, however, to date, no decision has been made.</p>	<p>Opponents of the aquaculture industry would criticize a decision by the provincial Minister of MAE to release the project from EA, and could question how DFO scientific advice on the project will be addressed.</p> <p>Draft media lines have been prepared in the event that DFO receives inquiries on this issue.</p> <p>Regional officials will continue to liaise with provincial officials to support their efforts to have the EA decision appropriately incorporate and respond to DFO advice.</p>	
2	Call for Nominations for petroleum exploration areas offshore of	<p>The Canada –NL Offshore Petroleum Board (C-NLOPB) is preparing to announce (possibly in the week of August 27) a Call for Nominations in an area, known as a “sector”, east of Newfoundland. This will provide an opportunity for companies to identify areas where they may be interested in bidding on exploration licences. The sector was established</p>	<p>The action by the C-NLOPB has no direct impact on any area the Department is counting towards marine conservation targets.</p> <p>Environmental and fishery groups,</p>	<p>Departmental personnel are preparing to share information about the C-NLOPB action to NAFO as per established protocols.</p>

**TAB 10 - UPCOMING ISSUES AND DECISIONS /
ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS**

SECRET

#	ISSUE / PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
	Newfoundland	in 2015, is mostly outside of the Canadian 200-mile EEZ, and contains one exploration licence already. The sector and the existing licence overlap an area closed to bottom contact fishing by the Northwest Atlantic Fishery Organization to protect sponges and seapens. The sector does not overlap with any areas that the Department has formally protected or is planning to protect inside of the EEZ.	including NAFO, could criticize actions by the C-NLOPB to promote further oil and gas exploration in areas where measures to protect benthic from harm by fishing have been implemented.	
		This action is part of the regular scheduled land tenure process of the C-NLOPB.		

Lily K. Abbass

Approved by Lily K. Abbass
Acting Regional Director General
Newfoundland and Labrador Region

August 31, 2018

Bieger, Tilman

From: Bieger, Tilman
Sent: September-04-18 5:24 PM
To: Pike, Kelly J; Butler, Annette
Cc: Finn, Ray
Subject: RE: ACTION REQUIRED - NL/MINO Weekly Call

Hello Annette

I'm not sure if you received anything from us already but here are a cpl possible EM items for MINO call

- C&P has laid charges against Ocean Choice International for fishing turbot (using bottom trawl) inside the NE Slope Marine Refuge February of 2018 this year. It appears the master of the vessel may not have been made aware of the closure established in December 2017. According to article in The Telegram, the company is likely to plead guilty: <http://www.thetelegram.com/news/local/ocean-choice-international-charged-with-illegal-fishing-237975/>
- Last Thursday the Canada-NL Offshore Petroleum Board announced a call for nominations in a sector east of Newfoundland. The sector, established in 2015, is mostly outside of the 200 mile EEZ, and includes some areas where the Northwest Atlantic Fisheries Organization NAFO has prohibited bottom contact fishing. It does not overlap with any areas that the Department has formally protected or is planning to protect inside of the EEZ, and has no direct impact on any area the Department is counting towards marine conservation targets. Environmental and fishery groups, including NAFO, could criticize actions by the C-NLOPB to promote oil and gas exploration in and around areas where fisheries have been restricted to protect sensitive areas.
- The Province of NL has still not released its decision on the environmental impact statement for the salmon aquaculture project being proposed in Placentia Bay by Grieg NL (awaited since July 31).

From: Pike, Kelly J
Sent: September-04-18 9:41 AM
To: Bieger, Tilman
Cc: Finn, Ray; Pike, Kelly J
Subject: FW: ACTION REQUIRED - NL/MINO Weekly Call
Importance: High

From: Butler, Annette
Sent: Tuesday, September 4, 2018 9:38 AM
To: Abbass, Lily <Lily.Abbass@dfo-mpo.gc.ca>; Finn, Ray <Ray.Finn@dfo-mpo.gc.ca>; Lambert, Robert <Robert.Lambert@dfo-mpo.gc.ca>; McCallum, Barry <Barry.McCallum@dfo-mpo.gc.ca>; Goulding, Bill <Bill.Goulding@dfo-mpo.gc.ca>; Lubar, John <John.Lubar@dfo-mpo.gc.ca>; Burton, Ron <Ron.Burton@dfo-mpo.gc.ca>
Cc: Carroll, Marlene <Marlene.Carroll@dfo-mpo.gc.ca>; Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Ivany, Zarinah <Zarinah.Ivany@dfo-mpo.gc.ca>; Keough, Brittany <Brittany.Keough@dfo-mpo.gc.ca>; Benson, Linda <Linda.Benson@dfo-mpo.gc.ca>; Letto, Deanna <Deanna.Letto@dfo-mpo.gc.ca>; Brown, Stacie <Stacie.Brown@dfo-mpo.gc.ca>

Subject: ACTION REQUIRED - NL/MINO Weekly Call
Importance: High

Good morning,

Ray will be taking tomorrow's call on Jackie's behalf.

Can you please provide your discussion items with a brief summary and/or confirm a nil report.

DUE RDGO: Tuesday, September 4, 2018 – 4:00 pm.

Thank you,

Annette

No information has been removed or severed from this page

**Pages 2522 to / à 2523
are duplicates of
sont des duplicatas des
pages 2509 to / à 2510**

Johnson, Roger

From: Johnson, Roger
Sent: Wednesday, September 5, 2018 2:07 PM
To: Griffiths, Helen
Subject: FW: question from Province re slamon tagging/marking

From: Hendry, Christopher
Sent: Wednesday, September 5, 2018 2:07 PM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: RE: question from Province re slamon tagging/marking

Correct. It comes up regularly as a criticism, but generally it has not been required by government. It is not required of the existing Canadian salmon aquaculture industry.

On a related note, it was tabled at the last Code of Containment Liaison Committee meeting, and there will be an analysis of available tagging technologies to be discussed at next year's annual meeting.

C

From: Johnson, Roger
Sent: September-05-18 2:04 PM
To: Hendry, Christopher
Subject: FW: question from Province re slamon tagging/marking

I would think that aquaculture operations do not routinely mark/tag fish – am I right

From: Griffiths, Helen
Sent: Wednesday, September 5, 2018 1:54 PM
To: Grant, Carole <Carole.Grant@dfo-mpo.gc.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>; Meade, James <James.Meade@dfo-mpo.gc.ca>
Subject: FW: question from Province re slamon tagging/marking

Hi Carole

I received the request for information below. Province is asking in relation to an aquaculture project. She is requesting information about other provinces/regions as well. I sought clarification as she requested information in relation to "finfish" so I thought this would be much broader than Salmonids Section, however, she said that "Just salmon should do it".

Can you provide any information based on her request below? As she is looking for information about other regions as well, would it be possible for you to check with your colleagues and ask same questions of them? I told her this may take some time to get info considering her request covers large area.

Roger/Jim, sending to you gents as well in the event that Aquaculture Science or EMB can provide "Knowledge of finfish aquaculture projects that have undertaken fish marking/tagging within the province/Canada or outside Canada"

Thanks
Helen

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: September-04-18 11:43 AM
To: Griffiths, Helen
Subject: question

Hi Helen,

Can DFO provide any info on the following:

1. Existing or recent marking/tagging programs for finfish in the province and/or Canada
2. Preferred methods of tagging/marketing finfish and rationale
3. Knowledge of finfish aquaculture projects that have undertaken fish marking/tagging within the province/Canada or outside Canada

Any info DFO can provide would be appreciated. Feel free to forward this email as you see appropriate.

Regards,

Joanne

Joanne Sweeney

Environmental Assessment Division
Department of Municipal Affairs and Environment
PO Box 8700, St. John's NL A1B 4J6
Tel. (709) 729-2822

“This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender.”

Grant, Carole

From: Grant, Carole
Sent: Thursday, September 6, 2018 11:27 AM
To: Davis, Ben; McCallum, Barry
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: 1834_min_eis_acc_lett_28Aug18.pdf; 1834_cab_eis_lett_5sept18.pdf; 1834_EAC_EIS review comments for proponent.pdf

Ben/Barry,

FYI, as per below the Province will be announcing their decision this afternoon to release the Grieg Aquaculture project from the EA process, which will allow the project to proceed subject to various regulatory requirements and conditions. I advised Ecosystems Management last week and again this morning to consult with Comms as I imagine this announcement will generate lots of media attention.

Please let me know if you have any questions or would like to discuss.

Thanks
Carole

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: September-06-18 10:46 AM
To: Hanchar, Dorothea; Ficzer, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
Cc: Squires, Susan
Subject: Placentia Bay Atlantic Salmon Aquaculture Project

Please see the attached letters advising the proponent of the Minister's decision regarding the acceptability of the EIS, and the Lieutenant Governor on Council's decision regarding the acceptability of the project. Updated project information will be available this afternoon on the Department of Municipal Affairs and Environment web page at the following link:

http://www.mae.gov.nl.ca/env_assessment/projects/Y2016/1834/index.html

Public notice of the decisions will be posted on the Government of Newfoundland and Labrador "News Releases" web page this afternoon, at the following link: <http://www.releases.gov.nl.ca/>.

I anticipate the proponent will request a meeting in the near future to discuss the requirements of the EEMP and EPP. I will contact the appropriate EAC members to arrange a meeting date.

I thank you for your participation on the environmental assessment committee and for your dedication to this file. If you have any questions or concerns please feel free to call me at 729-2822.

Best regards,

Joanne

Joanne Sweeney
Project EAC Chair
Environmental Assessment Division

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No information has been removed or severed from this page

Grant, Carole

From: Grant, Carole
Sent: Thursday, September 6, 2018 11:28 AM
To: Bradbury, Ian R; Dempson, Brian
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: 1834_min_eis_acc_lett_28Aug18.pdf; 1834_cab_eis_lett_5sept18.pdf; 1834_EAC_EIS review comments for proponent.pdf

FYI, Minister's decision to release Grieg Aquaculture project from further environmental assessment will be announced this afternoon. This will effectively allow the project to proceed subject to various regulatory requirements and conditions.

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: September-06-18 10:46 AM
To: Hanchar, Dorothea; Ficzer, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
Cc: Squires, Susan
Subject: Placentia Bay Atlantic Salmon Aquaculture Project

Please see the attached letters advising the proponent of the Minister's decision regarding the acceptability of the EIS, and the Lieutenant Governor on Council's decision regarding the acceptability of the project. Updated project information will be available this afternoon on the Department of Municipal Affairs and Environment web page at the following link:

http://www.mae.gov.nl.ca/env_assessment/projects/Y2016/1834/index.html

Public notice of the decisions will be posted on the Government of Newfoundland and Labrador "News Releases" web page this afternoon, at the following link: <http://www.releases.gov.nl.ca/>.

I anticipate the proponent will request a meeting in the near future to discuss the requirements of the EEMP and EPP. I will contact the appropriate EAC members to arrange a meeting date.

I thank you for your participation on the environmental assessment committee and for your dedication to this file. If you have any questions or concerns please feel free to call me at 729-2822.

Best regards,

Joanne

Joanne Sweeney
Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

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Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Office of the Minister

Mr. Knut Skeidsvoll
P.O. Box 457
205 McGettigan Blvd.
Marystown, NL
A0E 2M0
GriegNL@griegnl.com

AUG 28 2018

Dear Mr. Skeidsvoll:

Re: Placentia Bay Atlantic Salmon Aquaculture Project (Registration 1834)



s.68(a)



Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Office of the Minister

Reg. #1834

SEP 05 2018

Mr. Knut Skeidsvoll
Grieg NL Nurseries Ltd.
Grieg NL Seafarms Ltd.
PO Box 457
Marystown, NL A0E 2M0

Dear Mr. Skeidsvoll:

RE: Release of the Placentia Bay Atlantic Salmon Aquaculture Project



s.68(a)

**Pages 2531 to / à 2534
are withheld pursuant to section
sont retenues en vertu de l'article**

68(a)


**of the Access to Information Act
de la Loi sur l'accès à l'information**

**ENVIRONMENTAL IMPACT STATEMENT
Environmental Assessment Registration 1834
Environmental Assessment Committee Comments
Placentia Bay Atlantic Salmon Aquaculture Project**

FISHERIES AND LAND RESOURCES

Forestry and Wildlife Branch Comments:

The Forestry and Wild Life Branch (FWB) has found that the Grieg NL Environmental Impact Statement of the Placentia Bay Atlantic Salmon Aquaculture Project is acceptable for release.



s.13(1)(c)

Within the context and scale of the proposed undertaking, this could be considered, if it was not significantly onerous or considered to have a significant impact on project costs however, consideration of requiring the proponent to demonstrate if this requirement would be an onerous and significant cost would be reasonable. There are precedents in both the Maritimes and Newfoundland and Labrador for this type of mitigation around aquaculture and hydroelectric development.

Rationale for recommendation:

Forestry and Wildlife Branch participated in the Environmental Impact Statement Committee and has reviewed the Environmental Impact Statement (EIS) provided by Grieg NL. This review of the EIS was exclusive to potential impacts on inland fish of Newfoundland, the conservation of which falls within the purview of FWB. In particular,

this review is primarily focused on the risks to wild Atlantic salmon in southern Newfoundland.

The EIS provides a reasonable overview of the risks to wild Atlantic salmon posed by salmon aquaculture. The literature review is current, if not entirely comprehensive.

There are three key types of risk to wild Atlantic salmon identified; genetic (loss of local adaptation), ecological (exclusion of wild fish from habitat), and disease (e.g. ISA or sea lice). Grieg NL has proposed a series of mitigations to address these three risks; triploid female salmon, a resilient cage system and recapture plan, and biological controls and monitoring respectively. The mitigation planning appears to reduce the risk of these impacts to a relatively low level within the context of the development. However, that risk is clearly *not* zero. It is important to consider the scale of the proposed undertaking relative to the size of wild Atlantic salmon populations in the region. At full production the project will have approximately two million salmon in sea production, and the Placentia Bay area likely has less than 10,000 wild salmon. Escape events or disease outbreaks would be rare, but they may occur. The economic costs of reducing this risk to zero (i.e. land based aquaculture) have been determined to be excessive, making the project non-viable. What options remain to provide insurance against a rare but potentially catastrophic event?

Fisheries and Aquaculture Branch Comments:

Recommendation:

The Aquaculture Development and Aquatic Animal Health Divisions have reviewed the Grieg NL 'Placentia Bay Salmon Aquaculture Project' Environmental Impact Statement (EIS) against the project's guidelines.

The review focused on the Division's authority, administrative duties and expertise under the Aquaculture Act pertaining to: licensing; production planning, strategies and standards; fish health management and oversight. Many good aquaculture production practices, procedures and environmental management and mitigations are integrated. Furthermore, the proponent has submitted a fish health management plan that includes

pre-transfer testing, biosecurity and fish health management. The proponent must identify a fish health team with a company/private aquaculture veterinarian who will oversee all aspects of fish health and welfare.

It should be noted that although sources of both salmon and lumpfish have been identified, these may change or not be approved due to logistics, fish health testing or production reasons. Transfers of fish will be dealt with on an individual transfer level.

The review concludes that the EIS is acceptable for releasing the undertaking from Environmental Assessment (EA). Of note, FLR and other permitting departments/agencies have conditionally approved the hatchery component of the undertaking pending the outcome of the project's EA. Concerning the marine sites, there is further information under the purview of FLR aquaculture-licensing process that the proponent must submit for review before acquiring aquaculture licences. This information will further specify details related to siting and production. Applications for the first production sites could be seen by the fall 2018 pending the EA outcome.

Release of the project will allow the proponent to begin construction of its hatchery. As well, the EIS identified many supporting supply and service partnerships. Release of the project is an important step in providing the regulatory certainty necessary for the proponent and associated supply and service companies to begin the required investments.

Further to the above comments, a table requested by the EA Division to assist the review of the EIS against the prepared guidelines has been completed for Fisheries and Land Resources' review of the EIS (Refer to Annex A).

Overview:

The following overview provides a more detailed summary of EIS content important to the Division's role and responsibilities. The time between the review of the initial project registration and the preparation of an EIS provided the proponent an opportunity to address the following:

- Clarify construction and operational elements of its plan;
- In a more comprehensive manner, describe the socio-economic and environmental character of the Burin and Placentia Bay region;
- Better describe its approach to emergency preparedness for accidental and environmental issues raised in public consultations;
- Clarify its intended supply and service partners;
- In a comprehensive manner, describe the containment standards and predicted performance of its the Midgard sea-cage system against provincial standards that are enforced under the authority of the Minister of Fisheries and Land Resources;
- Describe advances in procedures to verify stock will be all female triploids;

- Outline a production strategy that will increase production in a moderate and incremental manner, consistent with the expressed interest and under the authority of the Minister of Fisheries and Land Resources; and
- An analysis of the predicted impacts and certainty of the project on valued environmental components and socio-economic interests.



FLR authority and regulatory controls concerning aquaculture development, licensing and aquatic animal health:

The Aquaculture Act provides the Minister of FLR authority over principle controls that ensure sustainable aquaculture development as follows:

- Issue aquaculture licences with terms and conditions that address socio-economic, fish health, biosecurity and the environment;
- Provide services and oversight related to licence terms and conditions;
- Link compliance with all associated federal and provincial approvals to the issuing and maintenance of an aquaculture licence;
- Ensure aquaculture operations' comply with stock containment standards;
- Permit the transfer of fish, including the type, timing, location, and number;
- Direct mitigation measures during a disease event; and
- Designate aquaculture inspectors.

s.13(1)(c)

After considering the EIS as a whole and its predicted outcomes, it is the Aquaculture Development Division's view that the most important consideration for the project is associated with production success of the proposed stock in Placentia Bay.

The undertaking will introduce a new strain of salmon not previously cultured in the province. The strain will be selected for and treated to be all-female triploid, and this will be a first attempt to do this on a commercial scale in the province. The proponent will develop its production in a bay area that has not previously hosted commercial-scale salmon aquaculture production.

- The EIS provides a description of why the proponent chose the triploid fish, the environmental merits, and how the state-of-knowledge on triploid robustness, matching with water conditions, and feeding has advanced to make it a viable strategy for Placentia Bay.

There is always uncertainty related to aquaculture production in a new location.

- The proponent has completed its due diligence concerning water conditions as well as other environmental conditions (i.e., ice and storms).

The proponent's commitment to use the Aqualine Midgard system represents advancement in design and engineering of containment systems for this province.

- The information provided supports our previous advice that the containment system meets or exceeds the regulatory standards prescribed in the 'Code of Containment for the Culture of Salmonids in Newfoundland and Labrador'. The proponent has provided a framework to respond to adverse environmental conditions (including various ice scenarios), and emergencies.

FLR has had extensive discusses with the proponent on this, and the proponent's support for this approach is reflected in the EIS. Upon release of the project from EA, further discussion and specifics of how this is done continues as a core part of aquaculture licensing, as well as performance-based conditions associated with financing if applicable.

MUNICIPAL AFFAIRS AND ENVIRONMENT

POLLUTION PREVENTION DIVISION

[REDACTED]

[REDACTED]

[REDACTED]

WATER RESOURCES MANAGEMENT DIVISION

[REDACTED]

TOURISM, CULTURE, INDUSTRY AND INNOVATION

TCII recommends that, from the perspective of TCII's mandate, the EIS is acceptable and the project may proceed in an environmentally acceptable manner. TCII advises that the EIS responds to the concerns identified by tourism stakeholders, primarily in the outfitting sector, about the potential risks associated with escapes, recapture plans, sea lice control, introducing a new strain of salmon and potential impacts on wild Atlantic salmon.

s.13(1)(c)

ENVIRONMENT CANADA AND CLIMATE CHANGE (ECCC)

Please see complete ECCC submission, attached.

FISHERIES AND OCEANS CANADA (DFO)

Please see complete ECCC submission, attached.

HEALTH CANADA

Health Canada, as an appointed member of the provincial Environmental Assessment Committee, has prepared the following comments related to the above-mentioned proposed aquaculture project in Marystown and Placentia Bay, NL. The comments are focused on areas within Health Canada's mandate. These include: 1) reviewing information related to pesticides and anti-fouling substances (which are the responsibility of the Pest Management Regulatory Agency of Health Canada (under the *Pest Control Products Act/PCPA*)); 2) drug approval (which is the responsibility of the Veterinary Drugs Directorate of Health Canada (under the *Food and Drugs Act*)); and certain disinfectants which are currently regulated by Health Canada and the Canadian Food Inspection Agency under the *Food and Drugs Act*. In addition, Health Canada, in its review of environmental impact assessments, also evaluates human health with respect to contamination in air, potable and recreational water, country foods, and noise.

Use of Pesticides/Drugs/Disinfectants:

Based on a review of the EIS, it appears that the proposed pesticides, drugs and disinfectants are currently approved by Health Canada for use at marine salmon aquaculture facilities. Provided they are administered by properly trained/licensed professionals, the company should be in compliance with federal regulatory requirements. Prior to administration of any pesticide, drug or disinfectant, the company should confirm that these substances are still approved for the specific use intended. If disposal is required, the company should dispose of any pesticide, drug or disinfectant in a manner such that adverse impacts to human health or the environment are minimized.

Contamination of Country Foods:

Country foods or 'traditional foods' are defined as all foods that are trapped, fished, hunted, harvested or grown for subsistence or medicinal purposes, outside of the commercial food chain. This project may impact country foods by introducing additional nutrients (e.g. uneaten food, feces) and chemicals (e.g. in-feed drugs) to the larger marine environment. Depending on disposal methods for cleaning solutions and/or disinfectants (used to decontaminate workers and their equipment between sites), these may also be directly discharged to the marine environment (although Appendix K does indicate that at some point in time there will be a procedure developed related to diver disinfection per site and diver disinfection procedures if diving multiple sites). Although the proponent indicates that they will minimize excess waste and reduce, reuse and recycle to the extent possible, it is important to consider that these nutrient-rich environments may attract

other non-target organisms which may eventually be harvested and consumed by local people and depending on the substance(s) released and concentration(s), these may have an impact on human health. Section 3.7.2 of the EIS (Classifying Anticipated Environmental Effects) indicates that toxicity effects on human health is a consideration in determining whether a project is likely to have significant adverse environmental effects, however, it is unclear from the documentation provided where this aspect was specifically evaluated.

Noise:

The marine-based component of the project (i.e. net pens) are planned to be situated in multiple areas in Placentia Bay, and may be near residences and/or cottages (where there may be an expectation of peace and quiet). Given that these boats will be idling during visits to the net pens, there may be concerns raised over noise at these human receptor locations. In the event of public complaints, additional mitigation should be considered to reduce noise levels to the extent possible. A Guidance Document for assessing noise and implementing appropriate mitigation strategies is attached.

TRANSPORT CANADA

Transport Canada has reviewed the EIS and recommends that the following comments be considered:

1. **Section 2.3 Regulatory Framework and Government Oversight:** Since the Rushoon Bay Management Area is located on Federal Waters, Transport Canada must review the proposal for significant adverse environmental effects as per Section 67 of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), before issuing a *Navigation Protection Act* (NPA) approval.
2. **Section 2.3 Table 2.2:** Consider adding to Table 2.2:

As per Transport Canada Regulations	Vessel compliance, marine pollution prevention, etc.	<i>Canada Shipping Act, 2001</i>	Transport Canada
-------------------------------------	--	----------------------------------	------------------

3. **Section 7.0 Effects of the Project on the Environment:** Environmental effects of the project on navigation are taken into consideration as part of the environmental review only when the effects are indirect, i.e. resulting from a change in the environment affecting navigation. Direct effects on navigation are not considered in the review, but any measures necessary to mitigate direct effects will be included as terms and conditions associated with the work approved or permitted pursuant to the *Navigation Protection Act*.
4. **Section 2.5 Monitoring and Mitigation Measures:**

Transport Canada recommends the following Mitigation Measures/Best

Management Practices:

- Vessels should be compliant with all *Canada Shipping Act, 2001*, requirements for inspection, which includes certification of the vessel and adequate training and appropriate certificate of competency for the operators.
 - Ensure that all vessels will have procedures in place to ensure safeguards against marine pollution: awareness training of all employees, means of retention of waste oil on board and discharge to shore based reception facilities, capacity of responding to and clean-up of accidental spill caused by vessels involved in any particular project.
5. **Appendix T: Emergency Response Plan:** Transport Canada would like to advise the proponent of CANUTEC, which is the Canadian Transport Emergency Centre operated by Transport Canada to assist emergency response personnel in handling dangerous goods emergencies. This national bilingual advisory centre is specialized in interpreting technical information, providing advice, and emergency response. CANUTEC offers 24-hour emergency telephone service at 1-613-996-6666 or *666 on a cellular phone.



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Environmental Stewardship Branch
6 Bruce Street
Mount Pearl, NL A1N 4T3

11 July 2018

Environment and Climate Change Canada (ECCC) has reviewed the environmental impact statement for the Placentia Bay Atlantic Salmon Aquaculture project and offers the general comments, followed by specific comments.

General Comments

ECCC-01 Canadian Environmental Protection Act

Grieg NL should be aware of the potential applicability of the *Canadian Environmental Protection Act* (CEPA, 1999) (<http://laws-lois.justice.gc.ca/eng/acts/C-15.31/index.html>). The *Canadian Environmental Protection Act* enables protection of the environment, and human life and health, through the establishment of environmental quality objectives, guidelines and codes of practice and the regulation of toxic substances, nutrients, emissions and discharges from federal facilities, and disposal at sea.

Controlling Toxic Substances

Under CEPA - Part 5, a substance is considered toxic if it is entering or may enter the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or its biological diversity, constitute or may constitute a danger to the environment on which life depends, and constitute or may constitute a danger in Canada to human life or health.

While there are currently no sector specific CEPA, 1999 regulations to manage toxic substances from marine finfish aquaculture, EC and Health Canada are currently implementing the **Chemicals Management Plan** which will evaluate chemicals currently in commerce according to their level of risk. Control strategies may be implemented for substances which present the highest levels of risk.

Further information on the Chemicals Management Plan can be found at: <http://www.chemicalsubstanceschimiques.gc.ca/plan/index-eng.php>.

Disposal at Sea

Federal legislation governing the disposal of substances at sea is found in the CEPA Part 7, Division 3, and Schedules 5 and 6. The definition of disposal is provided in CEPA sub-section 122 (1). In Canada most disposal at sea activities involve dredged material; however, two primary examples of marine finfish aquaculture activities that are likely to be defined as Disposal at Sea include the disposal of aquaculture wastes at sea from a ship and the disposal or abandonment at sea of a platform or another structure. Disposal at Sea permits are available only for a limited categories of wastes and only if disposal at sea is demonstrated to be the preferred waste management option. For further information refer to <https://www.ec.gc.ca/iem-das/Default.asp?lang=En&n=0047B595-1>.

Provisions for Management of Hazardous Waste

ECCC is responsible for administering the *Interprovincial Movement of Hazardous Waste Regulations* (IMHWR) under the CEPA. These regulations set out the conditions which must be met in order to monitor and track the transboundary movement of hazardous wastes in Canada to ensure that they are recycled or disposed of in an environmentally sound manner. Proponents should be aware that under the IMHWR, all hazardous wastes must be identified, appropriately packaged and transported by an authorized carrier within Canada. In addition, all hazardous wastes must be accompanied by a manifest or movement document. The IMHWR and related information on these regulations is available at <http://ec.gc.ca/lcpe-cepa/eng/regulations/detailReg.cfm?intReg=68>.

New Substances Notification Regulations

Project management should take into account the potential applicability of the New Substances Notifications Regulations (NSNR) of CEPA, 1999. The NSNR apply to new substances manufactured in or imported into Canada. A new substance is any substance that is not listed on the Domestic Substances List (DSL).

Any person who intends to import or manufacture a new substance in Canada must submit a notification to the New Substances Program **prior** to importing or manufacturing the substance. The NSNR apply to chemicals, polymers, biochemicals, biopolymers and animate products of biotechnology. Products of biotechnology include micro-organisms, such as bacteria and fungi, and organisms other than micro-organisms, such as genetically-modified fish and livestock. The NSNR specify the requirements for the notification of new substances. They prescribe the information that must be submitted, when it must be submitted and the time in which the government must complete the risk assessment.

Based on the information provided, EC is unable to determine whether the proponent will be subject to the NSNR. For more information, please visit the NSN website (<http://www.ec.gc.ca/subsnouvelles-news subs/default.asp>).

National Pollutant Release Inventory Reporting

The National Pollutant Release Inventory (NPRI) is a federally administered program that collects data on annual on-site emissions of substances to the air, water, and land, as well as off-site transfers of substance disposal or recycling. Facilities that meet certain reporting criteria for any of the listed substances are required to report information to EC through the NPRI. Reporting to the NPRI is a legal requirement and mandatory under Canadian Law; the legal authority for the NPRI is the *Canadian Environmental Protection Act*, subsection 46(1).

Generally, facilities must review their activities and determine if they are subject to reporting. Further details on NPRI reporting requirements may be found by contacting the NPRI office at 1-877-877-8375 or inrp-npri@ec.gc.ca.

ECCC-02 Construction

At the project planning stage, all available construction materials should be considered (e.g., untreated wood, treated wood, pre-cast concrete, corrosive-resistant steel, plastic lumber), and those materials best suited to the conditions and intended use of the structure should be selected. Analysis of the preferred construction material should include a consideration of the full life-cycle of the material (ease of use, design factors associated with the construction

material, maintenance requirements, and final disposal). Environmental implications (e.g. storm and ice damage) associated with each life-cycle phase should also be considered.

Concrete Production

Discharges from project work involving the use of concrete, cement, mortars and other Portland cement or lime-containing construction materials may have a high pH, and work should be planned and conducted to ensure that sediments, debris, concrete, and concrete fines are not deposited, either directly or indirectly into the aquatic environment. Any potentially contaminated water (e.g. exposed aggregate wash-off, wet curing, equipment and truck washing), should be prevented from entering the aquatic environment unless it can be confirmed that this water will not be deleterious to fish or harmful to migratory birds. Containment facilities should be provided at the site as required.

ECCC-03 On-land Disposal and Site Disturbance

In general, impacts related to onshore disturbance should be designed so as to:

- place a priority on pollution prevention;
- facilitate compliance with the general prohibition against the deposit of a deleterious substance into waters frequented by fish (Section 36 of the *Fisheries Act*); and
- respect applicable Canadian Council of Ministers of the Environment (CCME) Canadian Environmental Quality Guidelines.

In terms of site disturbance the following 'best practices' should be reflected in efforts to manage impacts so as to respect the above-noted objectives:

- install siltation control structures (e.g. silt curtains, cofferdams, sediment fences) prior to beginning any activities involving disturbance of the site and work along the shoreline if appropriate;
- schedule work to avoid periods of heavy precipitation;
- maintain a vegetated buffer zone, as appropriate and where possible, to protect surface waters;
- immediately stabilize any disturbed areas along the shoreline to prevent erosion;
- monitor the integrity and effectiveness of the siltation control structures daily for the duration of the project; and
- upon completion of the project, only remove silt control structures when suspended sediment concentrations within any contained water have returned to background conditions.

ECCC-04 Suspension of Sediments

The disturbance of substrate during in-water activities increases sediment concentrations and turbidity in the water column. This disturbance may alter light penetration, temperature and water chemistry regimes, and may affect photosynthesis. The CCME (Canadian Council of Ministers of the Environment) *Canadian Environmental Quality Guidelines* (1999) recommend that, for protection of marine waters, human activities should not cause suspended solids levels to increase by more than 10% of the natural conditions expected at the time. The guidelines also recommend that no solid debris, including floating or drifting materials or settleable matter, be introduced into marine and estuarine waters.

ECCC-05 Accidents and Malfunctions

Provisions for the management of hazardous materials (e.g. fuels, lubricants) and wastes (e.g. contaminated soil, sediments, waste oil) should be identified and implemented in order to ensure compliance with Section 36 (3) of the *Fisheries Act*, and with CEPA and the *Migratory Birds Convention Act* and their Regulations. The following mitigation recommendations are made with respect to the transport, storage, use and disposal of petroleum products and toxic substances which, when employed, may minimize the risk of chronic and accidental releases and impacts to the environment:

- Even small spills of oil can have very serious effects on migratory birds and fish. Therefore, every effort should be taken to ensure that no oil spills occur in the area.
- Fuelling and maintenance of equipment should be undertaken on level terrain, at least **30m** from any surface water (including wetlands), on a prepared impermeable surface with a collection system to ensure oil, gasoline and hydraulic fluids do not enter surface waters. Waste oil should be disposed of in an approved manner.
- Biodegradable alternatives to petroleum-based fluid for heavy machinery are commonly available from major manufacturers. Such biodegradable fluids should be considered for use in place of petroleum products whenever possible, as a standard for best practices.
- Drums of petroleum products or chemicals should be tightly sealed against corrosion and rust and surrounded by an impermeable barrier in a dry, water-tight building or shed with an impermeable floor.
- In order to ensure that a quick and effective response to a spill event is possible, spill response equipment should be readily available on-site. Response equipment, such as adsorbents and open-ended barrels for collection of cleanup debris, should be stored in an accessible location on-site. Personnel working on the project should be knowledgeable about response procedures. The proponent is encouraged to prepare contingency plans that reflect a consideration of potential accidents and malfunctions and that take into account site-specific conditions and sensitivities. The Canadian Standards Association publication, *Emergency Preparedness and Response*, CAN/CSA-Z731-03¹, is a useful reference.
- All spills or leaks, such as those from machinery or storage tanks, should be promptly contained and cleaned-up. The proponent should report any spills of petroleum or other hazardous materials to the Environmental Emergencies 24 Hour Report Line (1-800-563-9089).

ECCC-06 Effects of the Environment on the Project

It is recommended that the proponent consider the 'Effects of the Environment on the Project' since coastal infrastructure is sensitive to the impacts of wind, waves, storm surges and sea ice. Climatological data required to support the EA can be found at <http://www.climate.weatheroffice.ec.gc.ca/>, and value-added data can be obtained from EC's Climate Services where the data exist. The project should be engineered to withstand extreme local weather conditions so as to minimize the risk of environmental emergencies.

ECCC-07 Impact of Climate Change on the Project

¹ Canadian Standards Association publication, *Emergency Preparedness and Response*, CAN/CSA-Z731-03 (<http://shop.csa.ca/en/canada/injury-prevention/canrsa-z731-03-r2009/inv/27019912003>)

Climate change-induced sea level rise will affect the project area. Over the next century, global average sea level rise projections range from 18 to 59 cm (IPCC, 2007). Crustal subsidence is also occurring over southern portions of the Atlantic Region. Coastal erosion will add to sea level rise effects as well. Sea level rise and crustal subsidence will exacerbate the effects of winds, waves and storm surges.

In considering the full life-cycle of the project, any vulnerability of the project to climate change should be identified and adjustments made if necessary. It may be more cost-effective to adjust design criteria at the planning stage than to retrofit in future.

ECCC-08 Monitoring and Adaptive Management

The proponent is encouraged to prepare a water quality monitoring program (including location and number of sampling sites, sampling protocols (parameters, sampling frequency) that allows for timely detection of water quality changes) and identifies action thresholds for implementation of appropriate adaptive management measures. Such a program should take into account existing and appropriate regulations, or Section 36 (3) of the *Fisheries Act*, the Canadian Council of Ministers of the Environment publication, *Environmental Quality Guidelines for the protection of aquatic life* (http://www.ccme.ca/publications/cegg_rcqe.html) in conjunction with existing ambient water quality and site-specific factors.

ECCC-CWS-01 Migratory Birds

Migratory birds, their eggs, nests, and young are protected under the *Migratory Birds Convention Act* (MBCA). Migratory birds protected by the MBCA generally include all seabirds (except cormorants and pelicans), all waterfowl, all shorebirds, and most landbirds (birds with principally terrestrial life cycles). The list of species protected by the MBCA can be found at: <https://www.ec.gc.ca/nature/default.asp?lang=En&n=496E2702-1>. Bird species not listed may be protected under other legislation.

Under Section 6 of the *Migratory Birds Regulations* (MBR), it is forbidden to disturb, destroy, or take a nest or egg of a migratory bird; or to be in possession of a live migratory bird, or its carcass, skin, nest or egg, except under authority of a permit. It is important to note that under the MBR, no permits can be issued for the incidental take of migratory birds caused by development projects or other economic activities.

Furthermore, Section 5.1 of the MBCA describes prohibitions related to deposit of substances harmful to migratory birds:

- “5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.
- (2) No person or vessel shall deposit a substance or permit a substance to be deposited in any place if the substance, in combination with one or more substances, results in a substance — in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area — that is harmful to migratory birds.”

It is the responsibility of the proponent to ensure that activities are managed so as to ensure compliance with the MBCA and associated regulations.

ECCC-CWS-02 Vegetation Clearing

Clearing vegetation may cause disturbance to migratory birds, and may inadvertently cause the destruction of their nests and eggs. Many species use trees, as well as brush, deadfalls and other low-lying vegetation for nesting, feeding, shelter and cover. This would apply to songbirds throughout the region, as well as waterfowl in wetland areas. Disturbance of this nature would be most critical during the migratory bird nesting period. Please see the webpage "General Nesting Periods of Migratory Birds in Canada" (Website: <http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=4F39A78F-1>) for more specific information concerning the breeding times of migratory birds in the proponent's local area. This project area falls within zone "D3-4".

Environment and Climate Change Canada provides the following recommendations:

1. The proponent is recommended to avoiding certain activities, such as clearing, during the regional nesting period for migratory birds. The breeding season for most birds within the project area occurs between April 15th and August 15st in this region (see above website for more specific time periods by zone).
2. Active nests can be discovered during project activities outside of the regional nesting period. To reduce the risk of impacting nests or birds caring for pre-fledged chicks at those times, Environment and Climate Change Canada-Canadian Wildlife Service (ECCC-CWS) recommends implementation of measures such as the establishment of vegetated buffer zones around nests, and minimization of activities in the immediate area until nesting is complete and chicks have naturally migrated from the area. It is incumbent on the proponent to identify the best approach, based on the circumstances, to complying with the MBCA
3. The proponent should be cognizant that while most migratory bird species construct nests in trees (sometimes in tree cavities) and shrubs, mitigations should be appropriate for migratory birds with different breeding strategies. For example, several species nest at ground level (e.g., Common Nighthawk, Killdeer, sandpipers), in hay fields, pastures or in burrows. Some bird species may nest on cliffs or in stockpiles of overburden material from mines or the banks of quarries. Some migratory birds (including certain waterfowl species) may nest in head ponds created by beaver dams. Some migratory birds (e.g., Barn Swallow, Cliff Swallow, Eastern Phoebe) may build their nests on structures such as bridges, ledges or gutters.
4. The proponent is recommended to develop and implement a management plan that includes appropriate preventive measures to minimize the risk of impacts on migratory birds (See "Planning ahead to reduce risks to migratory bird nests", PDF: http://publications.gc.ca/collections/collection_2011/ec/CW66-295-2011-eng.pdf). It is the responsibility of the individual or company undertaking the activities to determine these measures. For beneficial management practices regarding how to avoid the incidental take of migratory birds nests and eggs, please refer to the Avoidance Guidelines (Website: <http://www.ec.gc.ca/paom-itmb/default.asp?lang=En&n=AB36A082-1>). The management plan should include processes to follow should an active nest be found at any time of the year.

ECCC-CWS-03 Fuel Leaks

The proponent must ensure that all precautions are taken by the contractors to prevent fuel leaks from equipment, and that a contingency plan in case of oil spills is prepared. Furthermore, the proponent should ensure that contractors are aware that under the MBR, "no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory

birds in any waters or any area frequented by migratory birds.” Biodegradable alternatives to petroleum-based chainsaw bar oil and hydraulic fluid for heavy machinery are commonly available from major manufacturers. Such biodegradable fluids should be considered for use in place of petroleum products whenever possible, as a standard for best practices. Fueling and servicing of equipment should not take place within 30 meters of environmentally sensitive areas, including shorelines and wetlands.

Provisions for wildlife response activities should be identified in the Oil Spill Prevention and Response Plan to ensure that pollution incidents affecting Wildlife are effectively and consistently mitigated. The document “Birds and Oil - CWS Response Plan Guidance” is attached and is provided to offer guidance on the development of wildlife response activities.

The following information should be included in any Oil Spill Prevention and Response Plan:

- Mitigation measures to deter migratory birds from coming into contact with the oil.
- Mitigation measures to be undertaken if migratory birds and/or sensitive habitat become contaminated with the oil.
- The type and extent of monitoring that would be conducted in relation to various spill events.

ECCC-CWS-04 Stockpiles

Certain species of migratory birds (e.g. Bank Swallows) may nest in large piles of soil left unattended/unvegetated during the most critical period of breeding season (April 15th through August 15th). To discourage this, the proponent should consider measures to cover or to deter birds from these large piles of unattended soil during the breeding season. If migratory birds take up occupancy of these piles, any industrial activities (including hydroseeding) will cause disturbance to these migratory birds and inadvertently cause the destruction of nests and eggs. Alternate measures will then need to be taken to reduce potential for erosion, and to ensure that nests are protected until chicks have fledged and left the area. For a species such as the Bank Swallow, the period when the nests would be considered active would include not only the time when birds are incubating eggs or taking care of flightless chicks, but also a period of time after chicks have learned to fly, because Bank Swallows return to their colony to roost.

See also for example the attached guidance concerning beneficial management practices that should be considered for implementation when designing mitigation measures for Bank Swallows, as well as guidance provided at <https://www.canada.ca/en/environment-climate-change/services/migratory-bird-conservation/publications/bank-swallow-riparia-sandpits-quarries.html>

ECCC-CWS-05 Revegetation

A variety of species of plants native to the general project area be used in revegetation efforts. Should seed mixes for herbaceous native species for the area not be available, it should be ensured that plants used in revegetation efforts are not known to be invasive.

ECCC-CWS-06 Invasive Species

Measures to diminish the risk of introducing invasive species should be developed and implemented during all project phases. These measures could include:

- Cleaning and inspecting construction equipment prior to transport from elsewhere to ensure that no vegetative matter is attached to the machinery (e.g., use of pressure water hose to clean vehicles prior to transport)
- Regularly inspecting equipment prior to, during and immediately following construction in areas found to support Purple Loosestrife to ensure that vegetative matter is not transported from one construction area to another.

ECCC-CWS-07 Light Attraction and Migratory Birds

Attraction to lights at night or in poor visibility conditions during the day may result in collision with lit structures or their support structures, or with other migratory birds. Disoriented migratory birds are prone to circling light sources and may deplete their energy reserves and either die of exhaustion or be forced to land where they are at risk of depredation.

To reduce risk of incidental take of migratory birds related to human-induced light, ECCC-CWS recommends implementation of the following beneficial management practices:

- The minimum amount of pilot warning and obstruction avoidance lighting should be used on tall structures. Warning lights should flash, and should completely turn off between flashes.
- The fewest number of site-illuminating lights possible should be used in the project area. Only strobe lights should be used at night, at the lowest intensity and smallest number of flashes per minute allowable by Transport Canada.
- Lighting for the safety of the employees should be shielded to shine down and only to where it is needed.
- LED lights should be used instead of other types of lights where possible. LED light fixtures are less prone to light trespass (i.e. are better at directing light where it needs to be, and do not bleed light into the surrounding area), and this property reduces the incidence of migratory bird attraction.

ECCC-CWS-08 Coastal Infrastructure

ECCC-CWS advises the following recommended beneficial management practices for working on shorelines:

- Staff, contractors and visitors should not approach concentrations of seabirds, sea ducks or shorebirds.
- All vessels should use the main navigation channels to get to and from the site, and should have well muffled machinery.
- Staff and contractors should undertake any measures that may minimize or eliminate discharge of oily waste into the marine environment.
- Food scraps and other garbage left on beaches and other coastal habitats can artificially enhance the populations of avian and mammalian predators of eggs and chicks. The proponent should ensure that no litter (including food waste) is left in coastal areas by their staff and/or contractors
- If there is any noticeable change in seabird numbers or distribution at the location during operations, ECCC-CWS should be notified.

ECCC-CWS-09 Species at Risk

The following avian species at risk (as listed on Schedule 1 of the *Species at Risk Act*) may occur within the study area: Olive-sided flycatcher (Threatened), Harlequin Duck (Special Concern; known to winter in the area), and Red Crossbill (*Percna* subspecies, Endangered).

Though unlikely to be found within the project footprint, these species may occur within the study area and we request that sightings be reported to ECCC-CWS.

ECCC-CWS-10 Wetlands

It should be clarified whether any coastal wetlands, including eelgrass beds, would be affected by the project.

The *Federal Policy on Wetland Conservation* (FPWC) is applicable to any Federal Departments exercising a power, duty, or function that would permit the carrying out of the project or associated activities. The policy recognizes the importance of wetlands to the environment, the economy and human health, and promotes a goal of no-net-loss of wetland functions. In support of this goal, the FPWC and related implementation guidance identify the importance of planning, siting and designing a project in a manner that accommodates a consideration of mitigation options in a hierarchical sequence - avoidance, minimization, and as a last resort, compensation.

For those potentially affected wetlands where the FPWC would be applicable, and avoidance is deemed not possible, a detailed description of potential effects, and of the reasons why avoidance and minimization of impacts were determined to not be possible should be provided. The mitigation measures and monitoring plan, as well as a proposed compensation plan, should be consistent with those proposed for other projects in Atlantic Canada.

A copy of the FPWC can be found at: <http://publications.gc.ca/pub?id=9.686114&sl=0>.

Specific Comments

ECCC-11 Incomplete Appendix

Sections 3, 4 and 5 of Appendix K (Grieg NL Fish Health Management Plan) are not included in the document because *Grieg NL is currently developing procedures and protocols...and the proprietary nature of the Standard operating Procedures*. Hence, ECCC cannot provide comments on chemicals that will be used.

Grieg NL proponent should determine the potential applicability of the *Canadian Environmental Protection Act 1999* (CEPA) with regard to the chemicals it plans to use in their aquaculture operations.

ECCC-12 ECCC's Proposed Environmental Emergency Regulations

The *Environmental Emergency Regulations* (E2 Regulations) under Section 200 of the CEPA 1999 apply to any person in Canada who owns, or has charge, management or control of, a substance listed on Schedule 1 of the regulations where either the total amount of the substance or the single largest container on site is equal to or greater than that specified in the Schedule. It should be noted that substances such as propane, gasoline and ammonia are listed in Schedule 1 of the regulations. It is the responsibility of Grieg NL to determine the applicability of the E2 Regulations.

It is stated in section 3.4.2 of Appendix M (Grieg NL Spill Management Plan, Land and Water) that *two 90,000 L fuel tanks (diesel) are proposed for the RAS Hatchery*. The proponent should note that on October 8, 2016, pursuant to subsection 332(1) of CEPA 1999, the Minister of

ECCC published in the *Canada Gazette*, Part I, the proposed *Environmental Emergency Regulations, 2016* (<http://www.gazette.gc.ca/rp-pr/p1/2016/2016-10-08/html/reg2-eng.php>).

The proposed Regulations will repeal and replace the current *Environmental Emergency Regulations* (<http://laws-lois.justice.gc.ca/eng/regulations/SOR-2003-307/index.html>) and will addition of 48 substances (including diesel).

ECCC-CWS-11 Section 2.5.1.1 RAS Hatchery – Construction - Breeding Bird Surveys

Quote: "As required under provincial and federal regulations, breeding bird surveys were conducted in early-July 2017 in advance of grubbing activities. Two experienced bird biologists systematically walked through the survey sites searching for birds and looking for evidence of nesting (see Appendix U). There was only one occasion that required mitigation action. Savannah Sparrows (*Passerculus sandwichensis*) had nested in an area not yet cleared as evidenced by the presence of a fledgling. The surrounding area had been deforested in the previous year (after the bird breeding season). The biologists determined that the fledgling Savannah Sparrow(s) required more time to reach an adequate size to fly away and cross the previously cleared area to reach suitable habitat before construction in the area commenced."

Migratory bird nests can be found in a wide variety of habitats and locations. Depending on the species, nests may be found at many heights in trees, in tree cavities, in shrubs, on the ground (including in hayfields, crops and pastures), on cliffs, in burrows, in stockpiles of overburden from mines, in quarry banks, within wetlands, and on human-made structures such as bridges, ledges, and gutters.

It is difficult to locate most nests. Nest sites are often hidden and adult birds avoid approaching their nests in a manner that would attract predators to their eggs or young. Moreover, the amount and complexity of habitat to be searched often limits the success of surveys intended to locate all active nests. The nests of a few species are easier to locate, particularly those in isolated trees, on human-made structures and/or in colonies.

To determine the likelihood that migratory birds, their nests or eggs are present in a particular location, use a scientifically sound approach that considers the available bird habitats, which migratory bird species are likely to be encountered in such habitats, and the time periods when they would likely be present. This will help you plan work activities to avoid having an impact on nesting birds. If further investigation is required to determine the presence of breeding birds, consider conducting an area search for evidence of nesting (e.g., presence of birds in breeding habitat through observation of singing birds, alarm calls, distraction displays) using non-intrusive search methods to prevent disturbance to migratory birds. In the case of songbirds, for example, "point counts" (a technique to locate singing territorial males) may provide a good indication of the presence of nests of these birds in an area. Please contact Environment and Climate Change Canada's Canadian Wildlife Service office in your region for further technical information about investigation methods for non-song bird species (notably, waterfowl, waterbirds and shorebirds).

In most cases, nest search techniques are not recommended because, in most habitats, the ability to detect nests remains very low while the risk of disturbing active nests is high. Flushing nesting birds increases the risk of predation of the eggs or young, or may cause the adults to abandon the nest or the eggs. Therefore, except when the nests searched are known to be easy to locate without disturbing them, active nest searches are generally not recommended; they have a low probability of locating all nests, and are likely to cause disturbance to nesting

birds. In many circumstances, incidental take is likely to still occur during industrial or other activities even when active nest searches are conducted prior to these activities.

In some cases, nest surveys may be carried out successfully by skilled and experienced observers using appropriate methodology, and in the event that activities would take place in simple habitats (often in man-made settings) with only a few likely nesting spots or a small community of migratory birds. Examples of simple habitats include:

- an urban park consisting mostly of lawns with a few isolated trees;
- a vacant lot with few possible nest sites;
- a previously cleared area where there is a lag between clearing and construction activities (and where ground nesters may have been attracted to nest in cleared areas or in stockpiles of soil, for instance); or
- a structure such as a bridge, a beacon, a tower or a building (often chosen as a nesting spot by robins, swallows, phoebes, Common Nighthawks, gulls and others).

Nest searches can also be considered when looking for:

- conspicuous nest structures (such as nests of Great Blue Herons, Bank Swallows, Chimney Swifts);
- cavity nesters in snags (such as woodpeckers, goldeneyes, nuthatches); or
- colonial-breeding species that can often be located from a distance (such as a colony of terns or gulls).

ECCC-CWS-12 Section 2.5.1.1 RAS Hatchery – Construction - Breeding Bird Surveys

Quote: “The area where the fledgling was observed was marked with a flag and the site was not cleared until two weeks later.”

The nest itself should never be marked using flagging tape or other similar material as this increases the risk of nest predation. If necessary, flagging tape should be placed at the limits of the buffer zone.

ECCC-CWS-13 Section 2.5.1.1 RAS Hatchery – Construction - Breeding Bird Surveys

Quote: “If future site clearance activities are required during the breeding bird period, the area will be monitored for nesting activity and appropriate mitigation actions will be taken. Areas will be visually inspected by construction personnel. If any evidence of nesting is detected, then a bird biologist will be consulted and delay of clearing activities will occur.”

Appropriate mitigation actions should be detailed in this section. Areas should be assessed by qualified bird biologists rather than by construction personnel.

ECCC-CWS-14 Section 2.5.2.2 Operations and maintenance - Predator protection and control

Quote: “Each sea cage will have bird nets which cover the entire top of the cage and prevent birds from taking fish. The bird net and bird poles are part of the Aqualine Midgard sea cage system and are designed to provide sufficient tension to eliminate net sagging. The sides of the bird net can be raised and lowered like a window blind to quickly and easily access the cage. Bird nets will be deployed ensuring mesh size will be sufficient to deter predators but minimize the risk of entanglement. If a bird does become entangled Grieg NL will follow established procedures to release the bird (which will be developed in consultation with ECCC-CWS). Grieg

NL will have a Migratory Bird Handling Permit (issued by CWS) in place and will follow reporting requirements.”

It should be ensured that bird release procedures have been established prior to project implementation. It should be ensured that all MBCA permits are in place prior to implementation.

ECCC-CWS-15 Section 4.8.3 Sensitive Areas VEC

Quote: “Population and/or breeding pair estimates for several seabird species within IBAs in the Study Area are similarly outdated, with some estimates dating to the late-1980s (e.g., breeding pairs of Black-legged Kittiwake at the Cape St. Mary’s IBA; and Leach’s Storm-petrel, and Black Guillemot at the Middle Lawn Island IBA).”

The ECCC-CWS population assessments of the above-mentioned colonies are either recently finished or are currently underway.

ECCC-CWS-16 Section 7.3.2.1 Entanglement

Quote: “Grieg NL will have mitigation measures in place to minimize entanglement effects on bird SAR. Each sea cage will have bird nets which cover the entire top of the cage and prevent birds from entering the sea cage. The bird net and bird poles are part of the Aqualine Midgard sea cage system and are designed to provide sufficient tension to eliminate net sagging. Bird nets will be deployed ensuring mesh size will be sufficient to deter predators but minimize the risk of entanglement. The mesh will be dark in colour to make it visible to birds. If a bird does become entangled, Grieg NL will follow established procedures to release the bird (which will be developed in consultation with ECCC-CWS). Grieg NL will have a Migratory Bird Handling Permit issued by CWS in place and will follow reporting requirements. In addition, sea cages will be routinely cleaned (at least weekly), minimizing the build-up of fouling organisms that may attract diving birds.”

It should be ensured that bird release procedures have been established prior to project implementation. It should be ensured that all MBCA permits are in place prior to implementation.

ECCC-CWS-17 Section 7.3.2.2 Attraction to Lights

Quote: “Installation and removal of the mooring system and sea cages will occur during daylight hours and as such, lighting is not expected to affect birds during construction and decommissioning activities. During operation of the sea cage sites, there will be lighting on the feed/accommodation and satellite barges as well as lights marking the mooring system boundary. Grieg NL will minimize the amount of lighting to that needed for safe operations. In addition, downward-pointing and shaded lights on the barges will be used to the extent possible. Weather permitting, the barges will be searched for stranded birds daily and any stranded birds will be handled, released, and documented according to ECCC-CWS protocols. In addition, any catchment basins on the barges will be covered to prevent birds from entering.”

The proponent should be prepared to conduct systematic checks for stranded birds, rather than only conducting routine checks, whereby designated crew members record search effort (even when no birds are found). Should storm-petrels or other species become stranded on vessels or on land, the proponent is expected to adhere to the attached *Procedures for handling and documenting stranded birds encountered on infrastructure offshore Atlantic Canada* (2017), which provides safe and effective procedures for dealing with and documenting live and stranded birds. A permit is required to implement this protocol. The proponent should be advised that it is required to complete a permit application form prior to proposed

activities. Permit application forms can be obtained by contacting ECCC's Canadian Wildlife Service (CWS) via email at ec.scfatlpermis-cwsatlpermits.ec@canada.ca.

The proponent should also be advised that any storm-petrels that are found dead should be collected and sent to ECCC-CWS. ECCC-CWS should be contacted within 24 hours in the event of mortality of an individual migratory bird species at risk or 10 or more migratory birds in one event or night.

Please don't hesitate to contact me should you have any questions regarding our comments.

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Birds and Oil - CWS Response Plan Guidance

In all circumstances where a polluter is identified the burden of cleanup and response lies with the polluter. However, responsibility for government overview of a response to an oil spill depends on the source of the spill. The identified **lead agency** has responsibility to monitor an oil spill response and to take control if an appropriate response is not undertaken by a polluter or their agent.

Lead agency responsibilities lie with:

- **Environment and Climate Change Canada**
 - For spills and incidents on federal lands and from federal vessels.
 - Potentially for land-based incidents in waters frequented by fish.
 - May take lead if environment is not being protected by other leads, Cabinet Directive 1973.
- **Canadian Coast Guard**
 - For spills from ships.
 - All spills of unknown sources in marine environment.
- **Provincial Department of Environment**
 - For spills from land-based sources.
- **Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) and Canada-Nova Scotia Offshore Petroleum Board (C-NSOPB)**
 - For spills related to offshore oil and gas exploration and production.
- **Transport Canada**
 - To investigate ship source and mystery spills in the marine environment.

The Canadian Wildlife Service of Environment and Climate Change Canada (ECCC-CWS) has the responsibility for licensing activities which involve the handling or disturbance of birds, and of providing advice and often direction to other agencies, responders and the polluter during oil spill incidents.

1. Hazing¹

Purpose: Prevent birds from coming in contact with oil

Options:

- Hazing by helicopter.
- Hazing by a fast response cutter (FRC) or other watercraft.
- Release of scare devices (e.g. Breco Buoys, Phoenix Wailer).
- Use of hazing sound makers: propane cannons, whizzers, bangers, pyrotechnic devices etc.

Scare devices have a limited range of influence and likely are not a viable option with a large slick. Use of Breco Buoys and Phoenix Wailers can be used but we consider them to be largely ineffective in the situation of a large slick. Logistically, helicopter hazing would be

¹ There are several scare techniques which may be effective and do not require a permit, however a permit under the Migratory Bird Regulations **is required** for the use of aircraft or firearms (defined as capable of emitting at projectile at more than 495 feet per second). Propane cannons, blank pistols or pyrotechnical pistols firing crackers shells with **less than 495fps are legal without a permit**. Most scare tactics are relatively short lived in terms of effectiveness as birds acclimatize to the disturbance so scare techniques should be alternated to be effective.

difficult unless it was possible for a helicopter to remain on a platform offshore overnight. Hazing by FRC or other vessels would be ideal.

Short-term focused hazing by the most expedient means should be attempted to move the birds away from the slick, if logistical conditions permit. Vessels at the site should have the ability to use sound makers (propane canons, pyrotechnic devices) to disperse birds in local areas. Such equipment should be deployed immediately to these ships with trained personnel to operate them. The vessels on site should be tasked to actively search and monitor for congregations of birds which could be vulnerable to oiling. If such groups are found then attempts should be made to disperse the birds away from the oil.

2. Disperse oil

Purpose: Prevent birds from contacting oil by getting oil off the surface of the water as soon as possible.

Options:

- Dispersants.
- Mechanical dispersal with FRCs or other vessels.
- Natural dispersal by environmental conditions.

For small spills, mechanical dispersal would be the preferred method.

3. Bird Collection²

Purpose: Implement a humane response to oiled birds as required by Environment and Climate Change Canada's National Policy on Oiled Birds and Oiled Species at Risk.

Options:

- The only option would be a ship-based effort to detect and collect dead and live oiled birds, both within the slick and adjacent to it.

All vessels in or near the slick should understand the need to collect birds. All vessels should have dip-nets, large plastic collecting bags to hold dead birds, and cloth bags or cardboard boxes in which to hold live oiled birds. Efforts should be made to retrieve live oiled birds to ensure they are dealt with humanely.

4. Wildlife monitoring

Purpose: Determine potential impact of spill.

Options:

- Ship-based surveys for oiled and unoiled wildlife.
- Aerial surveys for oiled and unoiled wildlife. Will require structured surveys (e.g. strip or transect surveys of spill area).
- Placement of ECCC-CWS staff on vessels and aircraft.

² Only those individuals authorized to do so (nominee on an existing federal permit issued under the Migratory Bird Regulations) can be involved with the collection of migratory birds.

Dedicated ship-based bird surveys should be initiated immediately. Ideally arrangements should be made to have a ECCC-CWS observer on vessels or flights. In addition trained seabird observers need to be placed on all vessels monitoring a slick. This should continue until the slick is dispersed.

5. Beached Bird Surveys

Purpose: Determine impact of spill on wildlife and retrieve any live oiled wildlife on beaches.

Options:

- Conduct daily beached bird surveys during the incident and until one week after slick has been removed or dissipated.

ECCC-CWS or other government officials (CCG, Enforcement Officers) will oversee the collection of dead and live oiled birds³ as instructed in ECCC-CWS' protocol for collecting birds during an oil spill response. This would only be required in circumstances where a large number of birds are potentially oiled or if the spill occurs in a sensitive area.

6. Drift Blocks

Purpose: Drift blocks may be deployed in slick to provide an estimate of bird mortality.

Options:

- Release from vessel.
- Release from aircraft.

The deployment of drift blocks would only be expected if there was a large spill and blocks should be released as soon as possible after a spill (ECCC-CWS should be consulted to determine protocol for drift block deployment and tracking). The polluter or their agent would be expected to ensure drift blocks are tracked and collected as appropriate.

7. Live oiled bird response³

Purpose: Implement a humane response to oiled birds as required by Environment and Climate Change Canada's National Policy On Oiled Birds And Oiled Species at Risk.

Options:

- Rehabilitation.
- Euthanization.

ECCC-CWS will be consulted to determine the appropriate response and treatment strategies which may include cleaning and rehabilitation or euthanization. ECCC-CWS policy specifically requires that species at risk or other species of concern be rehabilitated.

³ Only those individuals authorized to do so (nominee on an existing federal permit issued under the Migratory Bird Regulations) can be involved with the collection of migratory birds.



Photo: John Reaume

BANK SWALLOWS in Pits & Quarries Guidance for Aggregate Producers

With habitats around the world, the bank swallow population in Canada is in decline, with an estimated drop of over 95 per cent since 1970 in Ontario alone. While the exact reason for this decline is unknown, loss of nesting sites and young broods as a result of habitat destruction/disturbance has been cited as a possible reason.

BACKGROUND:

The bank swallow (*Riparia riparia*), can nest in colonies from 3 to about 2,000 burrows and average about 70 burrows. Sand and gravel pits often provide suitable habitats for bank swallow colonies and have become important nesting sites for this species.

The bank swallow eats flying insects and spends the winter in South America. It returns to Canada between late April and May to breed. Burrow numbers generally continue to increase until mid-to-late June and colonies often remain active until mid-August.

BANK SWALLOWS IN PITS & QUARRIES

- Bank swallows are attracted to pits and quarries. They build nests in stockpiled product or banks and they prefer sand or silty sand.
- Breeding season is early May to mid-August in southern Ontario and late-May to mid-August north of Sudbury.
- Excavation or construction during the spring and summer can negatively affect bank swallows or their nesting sites (Environment Canada, 2011).
- These birds will take advantage of stockpiled product and small banks up to large extraction faces offering suitable habitat within a pit, which has the potential to reduce operational access to these areas during the breeding season.

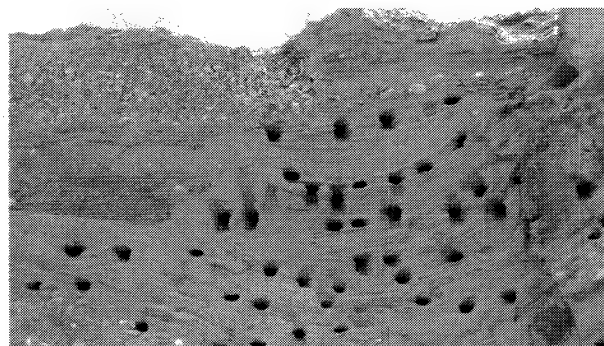


Photo: Mark Browning

The nest is built at the end of a burrow dug mostly by male bank swallows into a vertical bank of sand or silt, or similar material.

YOUR LEGAL RESPONSIBILITY

Bank swallows and their nests are protected under the federal *Migratory Birds Convention Act, 1994*. It is an offence for anyone to kill, hunt, capture, injure, harass, take or disturb a migratory bird nest or eggs. Offenders are liable to a fine or imprisonment. A review is currently underway to determine whether the bank swallow should be declared a species at risk in Ontario.

WHAT YOU CAN DO

- Pre-plan in March to late April (or mid-May north of Sudbury) by altering working faces and stockpiles to prevent harassment or harm to bank swallows. Manage these areas throughout the breeding season to make these potential nesting sites unattractive. See next page for details.
- Provide alternate nesting sites in an inactive portion of your pit or quarry. See next page for details.

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HOW TO CREATE & PROTECT HABITAT

✓ **DO** set aside pre-existing suitable habitat or create new habitat in inactive area(s) of a pit or quarry before the breeding season begins by creating vertical faces of 70 degrees or more in piles or banks. These areas should be off-limits to excavation for the duration of the breeding season from May - August. Heavy machinery near colonies is likely to disturb the swallows and reduce nesting productivity.

✓ **DO** cordon off these areas and inform all pit employees of the location of the colony and to avoid disturbing the colony until further notice when bird colonies are established, or suitable faces are created. This will help conserve active colonies. (Using sand piles, or pylons with or without police tape, are easy and effective ways to cordon off nesting sites.)

HOW TO DISCOURAGE BANK SWALLOWS FROM NESTING

✓ **DO** discourage bank swallows from nesting in areas that will be excavated over the breeding season by contouring faces to have a less vertical slope (either by sloping off or piling material on the face to create a slope that is less than 70°). Vertical faces located high up on a slope may have to be altered from above if possible, or extraction in these areas should be scheduled for after mid-August when the birds have left.



Photo: Charles M. Francis

✓ **DO** install bird deterrent devices before breeding season starts, such as plastic owls (Great Horned Owls), to discourage bank swallows from establishing a colony in suitable banks.

* **DON'T** use deterrent devices (e.g. plastic owl) once a colony has been established since this could interfere with the bank swallow's ongoing nesting activities.

OTHER GENERAL CONSIDERATIONS

✓ **DO** secure access to your stockpiled material throughout the season by ensuring no vertical faces remain in the stockpile. (Slopes less than 70 degrees will prevent birds from nesting.)

✓ **DO** extract material ahead of the breeding season and create suitable habitat in the process by creating vertical faces greater than 70 degrees.

✓ **DO** devote a few minutes to removing vertical faces at the end of the work day so that bank swallows don't begin to build in these faces overnight or over a weekend.

* **DON'T** operate heavy machinery or excavate material within 50 metres of a colony. However, moving heavy equipment past a colony once is unlikely to cause any problems.

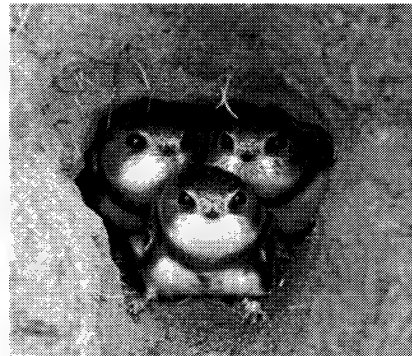


Photo: Robert McCaw

RESOURCES:

Environment Canada. 2011. *Bank Swallow (Riparia riparia) Know Your Legal Obligations (CW66-297/1-2011E-PDF)*. Retrieved from http://publications.gc.ca/collections/collection_2011/ec/CW66-297-1-2011-eng.pdf

Quarry Products Association Northern Ireland. *Biodiversity Advice Notes Sand Martin Riparia riparia*. Retrieved from <http://www.qpani.org/pdf/sandmartinadvisenotes.pdf>

DATE: April 26, 2013

ONTARIO STONE, SAND & GRAVEL ASSOCIATION

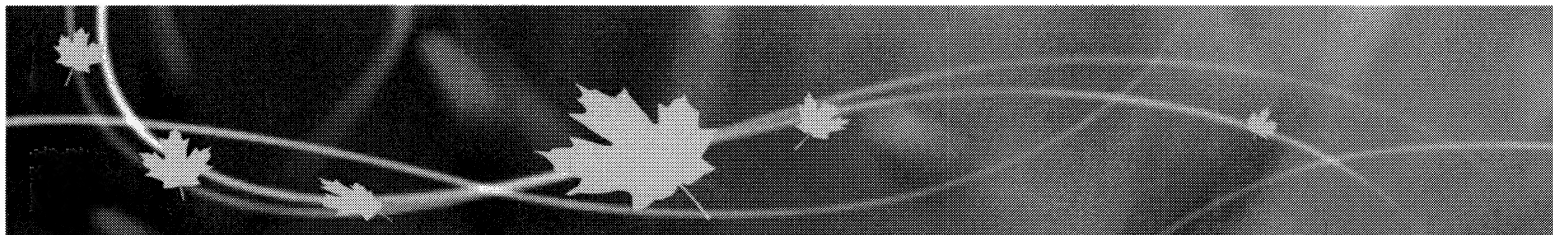
5720 Timberlea Blvd., Suite 103, Mississauga, ON L4W 4W2

Phone: (905) 507-0711 Fax: (905) 507-0717 Web: www.ossaga.com www.theholestory.ca

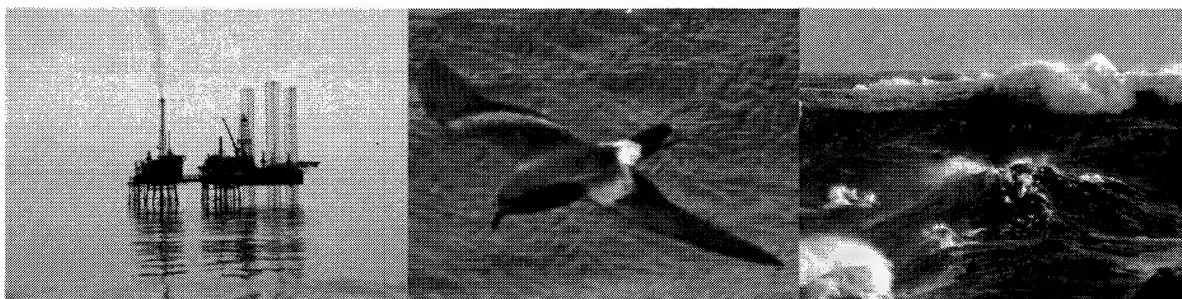


Environment and
Climate Change Canada

Environnement et
Changement climatique Canada



Procedures for handling and documenting stranded birds encountered on infrastructure offshore Atlantic Canada



Available at <https://www.cnlopb.ca/wp-content/uploads/mkiasseis/bestpracbird.pdf>

Canada

**Pages 2564 to / à 2581
are withheld pursuant to section
sont retenues en vertu de l'article**

68(a)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

**Pages 2582 to / à 2590
are duplicates of
sont des duplicatas des
pages 1630 to / à 1638**



P.O. Box 5667
St. John's, NL A1C 5X1

Your file Votre référence

July 12, 2018

Our file Notre référence
16-HNFL-00041

As requested, Fisheries and Oceans Canada (DFO) has completed a review of the document entitled "**Environmental Impact Statement of the Placentia Bay Atlantic Salmon Aquaculture Project**" submitted on behalf of Grieg NL dated May 25, 2018 and offers the following comments for your review and consideration.

Executive Summary

- **Page xxix. Sea Cage Sites.** *"The crew change sites will have specific areas for embarkation to and disembarkation from the proposed sea cage sites, which is designed to avoid cross-contamination."* It is unclear how avoidance of cross-contamination will be achieved as some of the proposed routes cross Bay Management Areas (BMAs), as shown in Figures 2.52 and 2.53. Specific areas for embarkation/disembarkation within a given BMA are not sufficient as pathogens could be present in a given BMA and then transmitted to another. Additional information is required on mitigation measures to address biosecurity risks associated with the introduction and spread of biofouling invasive species.
- **Page xxx. Sea Cage Sites.** The document states that all sea cages will be attended by a remotely operated vehicle (ROV) and operator in addition to a camera monitoring above and below the water surface. This seems to imply that each cage will be equipped with its own ROV and operator. Clarification is required on the frequency the cages will be monitored (e.g., monthly, weekly, daily) and whether the ROV will be shared between BMAs.
- **Page xxxi. Assessment Boundaries.** The EIS states that the boundaries of the Study Area are the Placentia Bay Extension Ecologically and Biologically Significant Area (EBSA) and that this is considered the 'maximum extent' wherein potential effects could occur. There is good evidence that wild salmon tagged within Placentia Bay move beyond the bay and non-local salmon are caught within the bay. Studies also exist for migratory movements on the south coast (see Reddin and Lear 1990; Pippy 1982). These studies should be included and discussed. This comment applies to several sections of the EIS and should be clarified throughout the document.
- **Page xxxiv. Genetic Integrity and Biological Fitness of Wild Atlantic Salmon.** Supporting documentation to demonstrate how 100% triploidy will be achieved needs to be provided.
- **Page xxxiv.** Based on the figures provided, the statement that the proposed cage sites are more than 50 km from the majority of scheduled rivers is confusing as most of the scheduled salmon rivers within Placentia Bay are less than 30 km from the proposed cage sites. Please provide a figure that shows all salmon rivers (scheduled and non-scheduled) in relation to location of proposed cage sites and report distance between them and how these distances were calculated. This issue needs to be clarified throughout the document ensuring to include known unscheduled salmon rivers as presented in Table 1 below.

Table 1. Non-scheduled salmon rivers near proposed cage sites.

River Name	Latitude	Longitude
Fair Haven Brook	47.541050	-53.891667
Little Barasway Brook	47.180000	-54.035700
Cuslett Brook	46.959817	-54.157450
Lance River*	46.819000	-54.067333



Branch River**

46.886883

-53.967317

- **Page xxxiv. Control of Sea Lice.** Please provide a detailed explanation of how proposed mitigation measures such as the use of sea lice skirts, administering feed at depths of 6-7 m below the surface, use of formulated feed, etc. will help control sea lice.
- **Page xxxiv. Effects on Benthic Habitat.** *“Proposed sea cage sites were selected based on sufficient current velocity and direction necessary to minimize depositional build-up from sea cages, adequate water depth for deployment of sea cages, and suitable bottom type (i.e., >50% hard bottom).”* Given the timeline of the currents data used in the study, please clarify how the “not significant” rating was derived.
- **Page xxxv. Fish and Fish Habitat VEC.** The document states that there will be cessation of feeding at ~80% satiation. It is assumed this means that the operators will stop administering feed to the salmon once ~80% satiation is reached. This will require constant monitoring of the fish behaviours.
- **Page xxxvi. Wild Atlantic Salmon VEC.** Please provide a reference for the Placentia Bay salmon abundance estimate or describe how this estimate was derived.
- **Page xxxvii.** In the first paragraph, it states that effects are expected *“to be minor, localized and relatively short-term”*. This is not known and the statement does not reflect the large amount of uncertainty, please clarify how this conclusion was derived.
- **Page xxxviii. Sensitive Areas VEC.** It is assumed that the medium-term effects would be the accumulation of organic wastes underneath the cages, which will occur despite implementation of the various mitigation measures listed. Clarification is requested.
- **Page xxxix. Follow-up Monitoring.** Collecting blood samples from salmon within scheduled salmon rivers following an escape event may not be the best approach for determining whether farmed salmon have entered freshwater. Follow-up monitoring should be determined in consultation with DFO. These consultations are currently ongoing and should reflex this throughout the EIS.

Section 2.0. The Proposed Undertaking

2.4.1. Project Rationale

- **Page 12.** Triploids would alleviate most of the concerns associated with direct genetic impacts on wild salmon populations. Recent information suggests that current methodology results in about 98% of the fish being sterile, although on p.17 it states that there will be 100% sterility. Please provide detailed methodology for testing to demonstrate 100% effectiveness.
- **Page 17.** The Executive Summary (p. xxxix) states that *“triploid female salmon do not enter freshwater.”* However, it states here that *“the propensity for triploid Atlantic Salmon to migrate into freshwater following an escape is significantly lower than for diploid Atlantic Salmon escapes.”* Revisit, provide references and clarify for consistency.

2.4.3. Land-based Facility (RAS hatchery)

- **Page 29.** The percentage of the eyed eggs that will be tested and certified for diseases, sterility and all-female prior to being shipped to NL, should be provided here.

2.4.4. Sea Farms

- **Page 45.** Promoting the Aqualine Midgard nets as escape-proof may be a strong statement as accidents may occur. While a number of clients were identified as using these cages, please provide the relative production of farmed salmon originating from the Aqualine nets versus other conventional nets in places like Norway, Scotland, and Ireland.
- **Page 52.** Regarding the statement that service vessels will assist with net changing, further information is required on whether nets will be routinely changed. What frequency or under what conditions will this happen?



- **Page 64.** *"If a transfer of fish between sea cages is required for any reason, a response/corrective action will be developed as per the established Standard Operating Procedures (SOP). This would likely involve the use of well boats."* Please clarify under what circumstances a transfer between sea cages would be required and also if there is a requirement/commitment to use well boats for this purpose.
- **Page 73.** *"Environmental changes and plankton levels are rated and depending on the results various mitigation responses will be initiated."* Please provide a detailed explanation of these mitigation responses.
- **Page 75.** Transfer of Fish from Sea Cage to a Processing Plant. The transfer process creates a risk in terms of potential for escapes. Additional information should be provided regarding the use of SOPs during this process.

Section 2.5. Monitoring and Mitigation Measures

- Given that the companion text in Section 7.1 does not provide documented evidence of the expected area of influence during Operations and Maintenance, information is lacking to determine if the proposed mitigation measures are appropriate. Some of this research is presented in the Fish and Fish Habitat Component Study, but the pertinent details should be presented within the main document.
- **Page 91.** Inspections. The document states that nets that are over three years old and still in use will be tested every 18 months by a third party, however, on p. 53, it states that *'typically once a year, Grieg NL will employ the services of a larger multi-purpose service vessel to assist with operations such as net changes.'* Please revisit and clarify for consistency.
- **Page 92.** Other Mitigation Measures. What are the contents of an escape response kit?
- Several times in the document there is reference to a DFO-recommended distance between salmon cages and salmon river mouths of 20-30km, citing DFO's 2016 CSAS document. However, this document does not state that DFO proposes such a distance. Instead, the exact wording is: *"Farm-to-salmon river separation distance criteria of 20-30 km have at times been proposed as a measure to reduce wild-farmed salmon interactions"*. Please clarify.
- **Page 100.** *"A routine program will be established for monitoring, measuring, and recording water quality at all active sea cage sites on a daily basis throughout the Project..."* These data would be highly valuable to industry regulators and should be made available. Consultation and cooperation between the Proponent and regulators to develop appropriate SOPs to ensure data quality is recommended.
- **Page 107.** The EIS states *"In the unlikely event of serious security breaches (such as vandalism or persons refusing to leave the site), Fisheries Officers from DFO will be contacted and respond to the scene"*. The statement is incorrect. Security breaches should be handled by the RCMP.

Section 2.8. Accidents and Malfunctions

- **Page 123.** Table 7.7 in the VEC section outlines potential interactions with marine mammals and sea turtles from project activities but it doesn't specify the potential interaction of lost/estranged gear. Please revisit and discuss interaction with lost gear.
- **Page 124.** Table 2.25. The interpretation of the probability and impact of escapees to the environment lacks detail. Please elaborate.

Section 4.0. Existing Environment

4.1.2. Climate and Meteorology



- **Page 139.** Wind Speed and Direction. While the statistics presented are useful, persistence analyses should be added. Wind direction variability (seasonality) should be better documented.
- **Page 140.** Climate Change. More information should be provided regarding future change in storm frequency and intensity, as well as winter intensity that could occur based on latest available science (e.g. Cohen et al. 2014).
- **Page 140.** Wind rose(s) should be added to the discussion on wind direction in Placentia Bay.
- **Page 141.** "A sea level rise of ~0.6 m is anticipated for the waters off southern Newfoundland, including Placentia Bay, by the 2081–2100 period." A reference should be provided for this statement.

4.2.2. Physical Environment

- **Page 143.** Ocean Currents. This section fails to describe the variability of the currents that have been observed and modelled, and which is considered to be the most important issue with respect to the physical environmental assessment. In fact, the only coastal circulation modeling of the area, published by Ma et al. (2012) is not referenced. Appendix D (Fish and Fish Habitat Component Study) states: "Since the variability due to tides accounts for approximately only 15% of the total variability, other factors are more important." This should be clearly stated in the main document as it implies a statistical variability of the currents much greater than that of the tides alone.
- **Page 144.** Wind and Wave Action. Due to its nature, the MSC50 dataset (note: the source/reference is missing from the text and should be added) is unlikely to be realistic for most of the sites of interest. MSC50 was based on a model initially developed for deep water (i.e. not coastal), is of insufficient resolution (0.1 degree for MSC06Min; that is about 10 km within Placentia Bay), and used basic bathymetry and coastline (GEBCO and CHS 15s) which limits its applications in coastal areas. Comparison with available data should be documented, limitations should be clearly stated, and a discussion on how this uncertainty is being mitigated should be provided.
- **Page 145.** Flood and Tidal Zones. "During storm events in September 2010 (Hurricane Igor) and January 2004, storm surges of ~0.03 m were observed at Argentia, resulting in a local sea level rise to 2.6 m as a result of the combined tidal and storm surge heights." A surge value of 0.93 m is reported on page 67 of Appendix D. Please revisit and provide the correct value.

4.2.3. Fish and Fish Habitat

- **Page 154.** Water Temperature. There are bay wide long-term data available from other sources that should be included in this assessment (see [Bedford Institute of Oceanography's Oceanographic Databases](#); and [DFO's Marine Environmental Data Section](#))
- **Page 154.** Figures 4.6 and 4.7. Standard deviations to illustrate the variability should be provided in these figures.
- **Page 160.** Corals and Sponges. This section does not make use of DFO research vessel incidental observations as referenced later in the document. Please revise for consistency.
- **Page 160.** Invasive Species. The document states that the primary Aquatic Invasive Species (AIS) concern in Placentia Bay is Green Crab. This is not correct. Although Green Crab are well known and well distributed in Placentia Bay, the primary concern for AIS is the presence of highly invasive tunicates, which are important (economic and biological) biofouling species, specifically vase tunicate (*Ciona intestinalis*) and golden star tunicate (*Botryllus schlosseri*).

Vase tunicates are highly invasive and economically significant and have been found at both Marystown and Burin. The site of the hatchery and many of the support and supply vessels are from the Marystown area (and those not using this area may find AIS at other smaller harbours). The movement of this species is prohibited by the AIS regulations in the *Fisheries Act*. There are three major reasons for concern that are not addressed in the document:

1. Transport of invasive species (vase tunicate) by supply boats and other vessels (McKenzie et al. 2016). There is no mention of how this will be prevented. This is



particularly important if the Proponent does not want to constantly clean their cages, and the weight alone of vase tunicate is a significant problem. More importantly, the Proponent will spread this species around Placentia Bay. It is important for the Proponent to have a plan to avoid spreading it throughout the bay on their vessels.

2. Regarding AIS and Biofouling, Grieg will monitor AIS and report to DFO. It is important to note that in addition to reporting, the Proponent will be responsible for the removal of the invasive tunicate. The Proponent received an experimental licence (2017) to monitor the proposed sites for AIS biofouling. It is not known where these data are or will be collected, and it was not discussed in the report.
 3. Although the document indicates cleaning the nets for biofouling, the Proponent cannot spray wash or clean the AIS species as they will spread in the water and infect other places. This is unacceptable and will cause a great deal more harm/cost for an aquaculture operation. Prevention is key but there are no references to prevent this introduction. This needs to be addressed.
- **Page 166.** There is no mention of the threatened designation for Lumpfish from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in November 2017. This section should be revisited and updated to include a discussion in this regard.

4.2.3. *Wild Atlantic Salmon*

- **Page 173.** The EIS acknowledges the COSEWIC evaluation on the status of Atlantic Salmon whereby South Newfoundland was designated as "threatened." COSEWIC uses a standard approach where trends in abundance are examined over a period of 15 years or three generations. More discussion of historical and current studies should be provided.
- **Page 174.** Migratory Patterns. Remove reference to Atlantic Salmon spending 'several months' in their natal freshwater habitat after hatching as they always spend at least two or more years in freshwater in Newfoundland systems.
- **Page 175.** Genetic Population Structure. The text should be updated to reflect that no diploid escapes were found in 2017.
- **Page 175.** The genetic structure discussion requires more detail and is missing several references (see: Jeffrey et al. 2018; Bradbury et al. 2015).

4.4.2.3. *Domestic Fisheries in the Study Area*

- **Page 208.** The statement "*currently there is a shift back to a groundfish-based fishery (Fig. 4.17).*" is not clear from figure referenced. It's recommended to add other supporting literature.
- **Page 224.** To what extent does Atlantic cod harvesting overlap with proposed cage sites (last paragraph); and to what magnitude?
- **Page 228.** The statement "...and quota adjustments in areas that show a flux in population demographics." should be clarified.

4.4.2.4. *Aquaculture*

- **Page 251.** Are there recent data for primary product value for mussels post 2007?

4.8. *Data Gaps*

- **Page 344.** Fish and Fish Habitat. Data gaps exist regarding cumulative effects. As the BMAs will not be followed simultaneously, a discussion of potential overall cumulative organic deposition and chemical persistence should be included especially in light of the lack of data on salinity and currents.



Section 6.0. Effects of the Environment on the Project

- **Page 351.** Superchill. "Temperature profiles during winter months in Placentia Bay are negatively correlated with water depth (see LGL 2018b in Volume 3)." The correlation could not be found in the document cited. Note that superchill events resulting in fish mortalities have previously occurred on the south coast of Newfoundland.
- **Page 352.** Algal Blooms. This section of the document cites DFO 2010c several times, but is not included in the references. Additionally, the DFO 2010 reference for Figure 6.1 is not known, so this information cannot be fully assessed.

Section 7.0. Effects of the Project on the Environment

Section 7.1. Fish and Fish Habitat VEC

- **Page 354.** There is no mention of potential escapes of farmed fish as an effect of the Project on the environment, specifically fish and fish habitat. This should be discussed under operations and maintenance.
- **Page 360.** Feeding of Farmed Salmon. There is no evidence provided to support the predictions made about magnitude and duration of effects. Please provide further detail.
- **Page 362.** Although it states that the presence of farmed salmon in sea cages could result in increased predators around the cages. A discussion of how this could increase mortality on migrating wild Atlantic Salmon smolts and adults should be included. Indirect genetic effects and ecological interactions with wild Atlantic Salmon should also be discussed.
- **Page 363.** "It is important to consider all of these visual indicators when assessing for impacts of aquaculture since *Beggiatoa* mats and opportunistic polychaete complexes (OPC) may be absent from sites due to water depth or seasonal hypoxic conditions (Hamoutene et al. 2014, 2016)." They are likely not *Beggiatoa* mats as reported in Verhoeven et al. 2016. Please clarify.
- **Page 364.** When referencing fallow period, it is stated that in Newfoundland and Labrador, the mandatory fallowing time after harvesting is seven months for a sea cage site and four months for a BMA. These time periods should be identified as *minimum* fallowing times.
- **Page 369.** Monitoring of the seabed using ROV, drop camera, and surficial sediment sampling is listed as a mitigation measure that will minimize the effect of further accumulation of organic material on the seabed. Unless there is some action that will be taken based on the results of the monitoring (i.e., a threshold of 'acceptable' organic deposition after which no further net cleaning will occur), then monitoring alone will not reduce the effect of further accumulation of organic material on the seabed. The same comment applies for use of monitoring under Section 7.1.2.6 Sea Cage Sites (p. 370). Please provide thresholds to be used if known.

Section 7.2. Wild Salmon VEC

- **Page 372.** There is no mention of potential escapes of farmed fish as an effect of the project on wild salmon. This should be discussed under operations and maintenance in the context of both direct and indirect genetic effects as well as ecological effects.

Section 7.3.3 & 7.3.4. Marine Mammals & Sea Turtles

- The EIS discusses entanglements of marine mammals and sea turtles due to the presence of sea cages but again, only considers the operations (cages in place on a site) and not for cages/ropes/nets that have broken away. Please discuss in this context. The same applies to Table 7.12 and 7.13.

Section 7.4. Sensitive Areas VEC



- **Page 404.** Table 7.1 highlights potential interactions with lights and fish and fish habitat. However, this is excluded in Table 7.14. Please clarify.

Section 7.7. Accidents and Malfunctions

- **Page 435.** *“Some studies suggest that the use of sterile triploid salmon in aquaculture will help to prevent genetic and ecological interactions between wild and farmed salmon.”* This will not prevent the occurrence of ecological interactions such as competition, habitat disruption, parasite/pathogen introduction, etc. (Glover et al. 2016, Madhun et al. 2017). Please clarify.
- **Page 435.** Keyser et al. (2018) was conducted in Atlantic Canada, not in Norway, as stated.
- **Page 436.** The EIS document seems to mix-up juvenile and adult surveys. Also, the statement “older individuals” is not correct as these were later stage hybrids and all individuals were young of the year. It should be clarified that there were no escapes captured in Fortune Bay or Bay d’Espoir in the fall 2017 surveys.

Section 7.8. Follow-up Monitoring

- **Page 475.** Please clarify why the Environmental Effects Monitoring and Follow-up Program (EEMP) is limited to verifying effects predictions for an accidental escape of farmed salmon on the wild salmon VEC. The EEMP should also monitor effects due to disease and pathogens, sea lice, and ecological interactions.

Section 7.9.2. Accidents and Malfunctions

- **Page 480.** It is unlikely that the residual effects would be “not significant”. Even in the absence of direct genetic interactions, indirect and ecological interactions (disease, competition, predation, etc.) should be discussed in more detail.

Component Study: Wild Atlantic Salmon

- **Page 1, Para. 2.** The potential impacts of disease/pathogens and parasites such as sea lice should also be discussed here.
- **Page 4, Para. 2.** Please correct the statement that *“after hatching, Atlantic Salmon spend several months to several years in their natal freshwater habitat...”* as Atlantic Salmon never spend as little as several months in freshwater in Newfoundland before migrating to sea as smolt. Also, since it reports salmon that spend one winter at sea as grilse, it should then also report that salmon that spend more than one year at sea are MSW.
- **Page 10, Para. 1.** DFO Science has information regarding farmed salmon captured at one of the Department’s counting facilities on the south coast, Garnish River. These salmon originated from escape incidents and this information should be reported and discussed in the EIS (DFO 2018).
- **Page 36.** It states that *“the deposition of uneaten fish feed can serve to attract wild fish, including wild salmon to sea cages”* and that this could affect migration patterns if wild salmon *“choose to travel between fish farms to eat uneaten fish feed instead of actively seeking natural prey.”* This should be discussed in the main EIS document.
- **Page 55.** Follow-up Monitoring, Planned Project Activities. There should be some discussion about validating predictions made regarding fish health, sea lice, ecological interactions, etc.

Appendix I – Wild Atlantic Salmon Component Study: Stofnfiskur Certification and Verification (All-Female Triploid)

- The document cites improved triploidy induction method but data is not provided nor does it appear to be published. Sample sizes of 10 eggs per batch make the assumption that failures in induction are not normally distributed (i.e., 100% or high rates of failure). Please clarify.

Appendix T – Wild Atlantic Salmon Component Study: Grieg NL Emergency Response Plan



- **Page 31.** It states that *"if necessary, Grieg NL will collaborate, by sharing recapture gear, or enter into an arrangement with local fisherman to ensure that adequate recapture efforts are implemented."* This should be mandatory and a commitment made by the Proponent to have this in place in the event DFO recommends that recapture efforts be undertaken. Recent evidence has shown that recapture efforts are most successful when implemented within 24-48 hours after an escape event because after this time escapes begin to disperse making it extremely difficult to recapture individuals.
- **Page 32, Para. 2.** It is recommended that an emergency licence should already be in place in the event an escape incident arises, so that there are no delays in initiating recapture efforts. Standard conditions could be specified ahead of time in the licence with input from DFO Science to ensure any adverse effects on wild salmon are minimized.
- **Page 32, Para. 3.** The text should specify where (i.e., immediately adjacent to cage site) and how deep nets will be set.
- **Page 32** The document states that site staff will immediately assess the sea cage to find the suspected source of the escape and attempt to repair it. Since this is often the first course of action for site staff, there should be separate dedicated staff or an arrangement made with local fishermen who can focus their efforts on recapturing the escapes. It also states that 'recapture nets will be checked four times daily while deployed'. Depending on time of year when recapture efforts occur, and if it's deemed appropriate to do so by DFO, nets may need to be constantly tended (i.e., during peak salmon migration period in June/July when there is a higher risk of intercepting wild salmon).
- **Page 33.** Appendix 8 appears to be missing.

Component Study: Fish and Fish Habitat

- **Page 14.** The first paragraph has misreferenced DFO (2017a) as the source for the preceding statements in this paragraph. However, the referenced document has no text in it that provides such information.

Appendix A - Fish and Fish Habitat Component Study: Grieg NL Benthic Depositional Modelling Report

- The ocean current time-series used for this study are too short to provide statistically robust estimates of dispersion. Previous studies done in the area found large, and broad, peaks at low frequency on the observed currents' power spectrum (<0.5 cycles per day or less) indicating the importance of low frequency variability (most likely due to storms or fairly regular strong wind events). These past observations should be stated in order to put modeling results and limitations in perspective. Other time-series should be used to represent this large variability. One possible option would be to use the current fields published by Ma et al. (2012)

Appendix D – Fish and Fish Habitat Component Study: Metocean Conditions for the Placentia Bay Aquaculture Sites

- All stated names should be illustrated on a map. There are numerous instances where they are not (e.g. Brine Islands, Red Island, Ship Island, etc.). The quality of the maps is also poor and blurred, and would benefit from a higher resolution. Also, the list of references is quite short and somewhat outdated (the most recent reference is from 2008). Please revise.
- **Page 28.** *"The positive phase of the North Atlantic Oscillation (NAO) index results in more and stronger winter storms crossing the North Atlantic on a more northerly track, and cold dry winters in Northern Canada and Greenland, while the negative phase results in fewer and weaker storms crossing on a more west-east track."* The report should describe the resulting effect on the ocean/water column, for example, as described in Colbourne et al. (2017).



- **Page 36.** *"In general, the near-surface currents in Placentia Bay have been observed to flow counter clockwise around the Bay."* A reference should be provided here, and also where other such statements are made. For example, the statement that follows: *"Since the variability due to tides account for approximately only 15% of the total variability, other factors are more important."*
- **Page 36.** The report provides an annual wind rose (Fig. 2.2) but this does not justify that wind is "predominately from the southwest during all seasons. Please clarify.
- **Page 36.** Please provide references for the datasets that have already been documented (e.g. Memorial University data reports: Hart et al. 1999; Schillinger et al. 2000).
- **Page 36.** It is understood that Smart Bay Buoys actually feature a current profiler, instead of a single point. This should be confirmed and the text modified if this is indeed the case.
- **Page 38.** *"At the head of Placentia Bay on the eastern side, the Memorial data showed that the current is consistently flowing into the bay with mean speeds between 11 cm/s and 18 cm/s at a depth of 20 m."* It is unlikely that currents would flow consistently in the same direction anywhere in the bay, although it's long-term mean (vector-averaged) might be. The source of this information is unclear (e.g., reference, mooring name). Please revisit and adjust the text accordingly.
- **Page 63.** A more recent paper by Ma et al. (2017) on surge in the Study Area should be referenced and discussed.

Thank you for providing the opportunity to review and provide comment on this project EIS Report.



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Available at http://publications.gc.ca/collections/collection_2017/sc-hc/H129-54-3-2017-eng.pdf

Guidance for Evaluating
Human Health Impacts
in Environmental Assessment:

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are withheld pursuant to section
sont retenues en vertu de l'article**

68(a)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Bieger, Tilman

From: Bieger, Tilman
Sent: September-06-18 12:12 PM
To: Finn, Ray
Subject: FW: URGENT INFORMAL: Grieg EIS

As discussed – messages related to inquiry from PMO at end of July (copied to you)

From: Pike, Kelly J
Sent: July-31-18 11:55 AM
To: Butcher, Ashley
Cc: Perry, Jacqueline; Butler, Annette; Bieger, Tilman; Griffiths, Helen; Kahn, Zoe; Jarjour, Jasmine; Malko, Carol; Khwaja, Saba; Finn, Ray
Subject: FW: URGENT INFORMAL: Grieg EIS

Ashley, as requested please see information below as approved by Jacqueline Perry, RDG-NL Region.

If you need anything further please let me know.

Kelly
On Behalf of Annette Butler

From: Perry, Jacqueline
Sent: Tuesday, July 31, 2018 11:47 AM
To: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>; Butler, Annette <Annette.Butler@dfo-mpo.gc.ca>
Cc: Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Subject: RE: URGENT INFORMAL: Grieg EIS

Approved

From: Bieger, Tilman
Sent: Tuesday, July 31, 2018 11:30 AM
To: Butler, Annette <Annette.Butler@dfo-mpo.gc.ca>; Perry, Jacqueline <Jacqueline.Perry@dfo-mpo.gc.ca>
Cc: Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Griffiths, Helen <Helen.Griffiths@dfo-mpo.gc.ca>
Subject: RE: URGENT INFORMAL: Grieg EIS
Importance: High

Hello Jackie, Annette

Please let me know if this needs to be condensed.

Tilman

- DFO is participating in the Committee established by the Province of NL to review the Environmental Impact Statement (EIS) for the aquaculture project proposed by Grieg NL in Placentia Bay. A key role of that committee is to pronounce on the “acceptability” of the EIS.

- To inform the advice we provided to the Committee, the Department held a scientific review process involving some 10 DFO scientists in the NL Region in June 2018. This review identified a number of areas in which the EIS did not adequately or properly characterize the environment and potential risks of the project, particularly in terms of the possible impacts of escaped farm salmon on wild salmon stocks.
- Based on this scientific advice, the Department recommended to the Committee on July 12 some 90 instances in which the EIS should be modified by providing clarification or additional information.
- In subsequent meetings it was determined that a number of these instances could be resolved during the post-EA regulatory process. There are however a number of recommendations remaining that need to be addressed in order for the Department to accept that the EIS properly describes the potential impacts of the project. Addressing these recommendations would not require the proponent to carry out any additional studies or research – they could all be addressed by the proponent incorporating or referencing existing information.
- It is our understanding that in order for Grieg NL to provide this additional information, the Province would have to declare the EIS deficient, which would trigger an additional 50-day review period. There have been assertions that this would unnecessarily delay the project start.
- We understand that some other regulatory authorities and some stakeholder groups have expressed concerns about some of the same elements in the EIS that we have.
- The Department is not fundamentally opposed to the project, and believes it could proceed, provided that appropriate mitigations and monitoring are implemented. However, to support evidence based decision-making by the Province and to protect our credibility, it is important that our advice to the Province incorporate and address key recommendations from our scientific review.
- Regional DFO personnel will continue to work closely with officials of the Province of NL and the representatives of Grieg NL to clarify and prioritise the information that is needed to ensure the EIS meets an acceptable standard of scientific rigour. The actual number of key issues to be clarified will likely be significantly less than the 90 initially identified.

From: Butler, Annette
Sent: Monday, July 30, 2018 8:43 PM
To: Bieger, Tilman; Finn, Ray
Cc: Pike, Kelly J; Perry, Jacqueline
Subject: Fw: URGENT INFORMAL: Grieg EIS

Hi Tilman,

Can you please draft a response to this request for RDG approval.

DUE RDGO: ASAP

Thank you,

Annette

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Butcher, Ashley <Ashley.Butcher@dfo-mpo.gc.ca>
Sent: Monday, July 30, 2018 8:41 PM
To: Butler, Annette
Cc: Kahn, Zoe; Jarjour, Jasmine; Malko, Carol; Khwaja, Saba
Subject: URGENT INFORMAL: Grieg EIS

Hi Annette -

MINO received an inquiry from PMO, who had been contacted by the province of NL on this issue. They're looking for information from the Department before noon, Tuesday:

An inquiry from the province was received asking what additional information DFO requires for the Grieg EIS and potential impacts on wild salmon? Could the Department please provide more information on this?

Thanks!

Ashley

Kelly, Jason

From: Kelly, Jason
Sent: September-06-18 2:25 PM
To: Johnson, Roger
Cc: Bieger, Tilman
Subject: RE: AES

Thanks Rogers, I'm updating now.. will use yours

jason

From: Johnson, Roger
Sent: September-06-18 2:23 PM
To: Johnson, Roger
Cc: Kelly, Jason; Bieger, Tilman
Subject: RE: AES

Tilman/Jason ->I have updated the Grieg portion of this table – not sure if I was responsible or not

Kelly -> could you ensure updates (in yellow) are included in the new table – still cannot seem to get this formatting thing to work .

From: Johnson, Roger
Sent: Thursday, August 30, 2018 2:34 PM
To: Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>
Subject: AES

I just updated the old one – please put in new template and check formatting

Thanks

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

Kelly, Jason

From: Kelly, Jason
Sent: September-06-18 2:59 PM
To: Griffiths, Helen
Subject: AES for September 17 (2).docx
Attachments: AES for September 17 (2).docx

Importance: High

Can you review and I send before our 3:30

Thanks
jason

TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS

SECRET

#	ISSUE /PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
Aquatic Ecosystems Sector / Secteur des écosystèmes aquatiques – September 17th to September 28th / du 17 septembre au 28 septembre				
	UPDATE - Grieg NL Placentia Bay Aquaculture Project	<p>On September 5th, 2018 the NL Department of Municipal Affairs and Environment (MAE) informed Grieg NL Nurseries Ltd. and Grieg NL Seafarms Ltd. (Grieg NL) that the proposed project was released further environmental assessment.</p> <p>This release is subject to a number of terms and conditions for mitigations and monitoring programs, including recommendations related to:</p> <ul style="list-style-type: none"> - Emergency recapture licenses and program in place should escapements occur; and - Testing for triploidy prior to salmon being put into sea cages; <p>The public were informed of the release on September 6, 2018.</p>	<p>Opponents of the aquaculture industry may criticize the decision by the provincial Minister of MAE to release the project from EA, and may question the scientific advice provided by DFO during the environment.</p> <p>Opponents groups have expressed concerns that the project will damage wild Atlantic Salmon stocks, and who feel DFO should block the project.</p>	<p>Media lines have been prepared in the event that DFO receives inquiries on this issue.</p> <p>The media lines highlight that DFO plays an advisory role to the province during the environmental assessment and that the decision to release the project lies exclusively with the Province of Newfoundland and Labrador.</p> <p>The project is now subject to regulatory approvals for aquaculture site licenses and introductions and transfers, both of which will involve DFO as well as Provincial regulators.</p>

TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS				SECRET	
#	ISSUE / PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION	

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Kelly, Jason

From: Kelly, Jason
Sent: September-06-18 4:22 PM
To: 'Sweeney, Joanne'
Subject: RE: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Hi Joanne

I am available Tuesday morning. Not available Tuesday afternoon

Jason

Jason Kelly

A/ Manager.— Regulatory Review
Fisheries Protection Program, Ecosystems Management Branch
Fisheries and Oceans Canada, Government of Canada
P.O. Box 5667, St. John's, NL A1C 5X1
Ph: (709) 772-4126
Email: jason.kelly@dfo-mpo.gc.ca

From: Griffiths, Helen
Sent: September-06-18 4:17 PM
To: 'Sweeney, Joanne'
Cc: Kelly, Jason
Subject: RE: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Hi Joanne

I inherited the Grieg file while filling in for Jason Kelly, [REDACTED]. Jason is now back as acting manager for Fisheries Protection Program. He is now your contact . I am retiring from the Grieg file ☺



Helen

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: September-06-18 3:57 PM
To: Griffiths, Helen
Subject: FW: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

s.19(1)

My apologies Helen, I meant to include you on the email below.

Joanne Sweeney

Environmental Assessment Division
Department of Municipal Affairs and Environment
PO Box 8700, St. John's NL A1B 4J6
Tel. (709) 729-2822

From: Sweeney, Joanne

Sent: Thursday, September 6, 2018 3:56 PM

To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Hendry, Christopher (Christopher.Hendry@dfo-mpo.gc.ca) <Christopher.Hendry@dfo-mpo.gc.ca>; carole.grant@dfo-mpo.gc.ca; Adams, Blair <BlairAdams@gov.nl.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelan@gov.nl.ca>; Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA) <Jerry.Pulchan@EC.GC.CA>; Denning, Allison (HC/SC) (allison.denning@canada.ca) <allison.denning@canada.ca>; Sweeney, Joanne <joannesweeney@gov.nl.ca>

Subject: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Good Afternoon,

[REDACTED] (Grieg NL) are requesting a meeting on Tuesday, September 11, 2018, to discuss the information requirements of the EPP. I'll pull together any references to the EPP in the EIS, EIS guidelines, recommendation, and release letter. I hope to forward those to you tomorrow. I'll send Perry and Knut links to EPPs on the EA web site for reference.

Please let me know if you are available to attend a meeting on Tuesday, and indicate whether morning or afternoon is preferable. It would be great if you could let me know by noon tomorrow (Friday, Sept 7).

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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White, Terrena

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: September-06-18 4:38 PM
To: Grant, Carole
Subject: RE: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Thanks Carole. I hope to confirm a meeting time tomorrow afternoon.

Joanne
Tel. (709) 729-2822

From: Grant, Carole <Carole.Grant@dfo-mpo.gc.ca>
Sent: Thursday, September 6, 2018 4:12 PM
To: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Subject: RE: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

I'm only available in the morning. Have a meeting and [REDACTED] in the afternoon.

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: September-06-18 3:56 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Sweeney, Joanne
Subject: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Good Afternoon,

[REDACTED] (Grieg NL) are requesting a meeting on Tuesday, September 11, 2018, to discuss the information requirements of the EPP. I'll pull together any references to the EPP in the EIS, EIS guidelines, recommendation, and release letter. I hope to forward those to you tomorrow. I'll send Perry and Knut links to EPPs on the EA web site for reference.

Please let me know if you are available to attend a meeting on Tuesday, and indicate whether morning or afternoon is preferable. It would be great if you could let me know by noon tomorrow (Friday, Sept 7).

Regards,

Joanne

Joanne Sweeney
Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

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Bieger, Tilman

From: Bieger, Tilman
Sent: September-06-18 4:49 PM
To: Johnson, Roger
Subject: RE: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

I just spoke to Jason.

He sent a msg earlier today to Joanne saying he is available next week – in line with earlier approach to “normalize” process and have FPP provide input. But he said he would likely delegate to someone else in FPP in longer term. And he is good with someone else doing it too.

I thought that when you Ray and I discussed earlier today we were leaning a bit to having Aquaculture Mgmt do this.... but let's discuss tomorrow AM

From: Johnson, Roger
Sent: September-06-18 4:33 PM
To: Bieger, Tilman
Subject: Fw: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Mine or FPP?

I am good either way


Sent from my BlackBerry 10 smartphone on the Bell network.

From: Hendry, Christopher <Christopher.Hendry@dfo-mpo.gc.ca>
Sent: Thursday, September 6, 2018 4:08 PM
To: Johnson, Roger
Subject: FW: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

What's our plan moving forward?

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: September-06-18 3:56 PM
To: Hanchar, Dorothea; Ficzer, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Sweeney, Joanne
Subject: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Good Afternoon,

 (Grieg NL) are requesting a meeting on Tuesday, September 11, 2018, to discuss the information requirements of the EPP. I'll pull together any references to the EPP in the EIS, EIS guidelines, recommendation, and release letter. I hope to forward those to you tomorrow. I'll send Perry and Knut links to EPPs on the EA web site for reference.

Please let me know if you are available to attend a meeting on Tuesday, and indicate whether morning or afternoon is preferable. It would be great if you could let me know by noon tomorrow (Friday, Sept 7).

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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Bieger, Tilman

From: Bieger, Tilman
Sent: September-06-18 5:52 PM
To: Johnson, Roger
Subject: FW: Media lines
Attachments: Anticipatory Media Lines sept 6 draft.docx

Thanks Roger and this is a good start

I have made a few recommended revisions – which also may change further tomorrow

From: Johnson, Roger
Sent: September-06-18 3:26 PM
To: Bieger, Tilman
Subject: Media lines

Here is my first crack at these revamped media lines.

I have talks planned with Sara D. in comms Friday am

I am not sure I like what I have written here and may totally change in AM

The telegram, VOCI and CBC websites are leading with this story – the telegram <http://www.thetelegram.com/news/local/grieg-nls-placentia-bay-aquaculture-project-released-from-environmental-assessment-239173/> has some interesting positive commentary and a passing mention of federal advice

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

Anticipatory Media Lines

Environmental assessment of Grieg's proposed operation in Placentia Bay

Issue

In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment. The release was challenged in court, resulting in a court-ordered Environmental Impact Statement (EIS). As per normal provincial Environmental Assessment (EA) process, DFO provided advice to the EA Committee. On September 6, 2018 the provincial minister found the Environmental Impact Statement to be acceptable and the provincial cabinet released the project from Environmental Assessment.

Strategic Considerations and Public Environment

Grieg's proposed aquaculture operation in Placentia Bay has been under intense media scrutiny from the beginning due to criticism from anti-aquaculture groups.

Some disapproval may be redirected towards DFO by groups concerned that this project will damage wild Atlantic Salmon stocks, and who feel DFO should block the project. The South Newfoundland population of Atlantic Salmon has been assessed under COSEWIC as "threatened." This may add to concerns about the effects Grieg's activities will have on wild salmon.

Recommendation

These media lines are anticipatory if inquiries are received related to DFO's role in the Environmental Impact Statement process. Aquaculture is a provincial lead in NL; therefore, media will be referred to the Province for questions outside of DFO's area of responsibility.

Media lines (Responsive)

- DFO often participates in provincial Environment Assessments (EA), in which the Department provides input relevant to its mandate.
- For the Grieg NL project in Placentia Bay, DFO-NL carried out a comprehensive review of the EIS, including a formal review by Science personnel, and provided related advice to the Provincial EA Committee.
- Issues identified by DFO during the EIS review are being addressed by the Provincial conditions of release and by the Environmental Effects Monitoring Program that will be required for the project.
- The aquaculture industry in NL is governed by a mature and robust provincial and federal regulatory regime, under aquaculture projects have to implement many precautionary and protection measures.
- Grieg NL will need to obtain licences for the introduction and transfer of fish and for aquaculture sites, both of which will require review and approval by DFO and provincial departments.
- The decision to release this project from provincial environmental assessment lies exclusively with the Province of Newfoundland and Labrador. The provincial Department of Municipal Affairs and Environment can provide information on that decision and their role.

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processes. DFO routinely reviews provincial EA registrations, Environmental Preview Reports or, as in this case, Environmental Impact Statements, and

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of protecting Canada's oceans and other aquatic ecosystems from negative impacts

Page 1: [3] Deleted **DFO-MPO** **06/09/2018 5:04:00 PM**

The Environmental Assessment process, is complete and the Province released the project with a number of conditions.

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and introductions and transfers,

Page 1: [5] Deleted **DFO-MPO** **06/09/2018 5:50:00 PM**

The Aquaculture industry in NL is regulated by a mature and robust regulatory process and this project like any other will have to comply with these regulations.

While DFO's responsibilities under the *Fisheries Act* contribute to sustainable aquaculture management,

Johnson, Roger

From: Johnson, Roger
Sent: Monday, September 10, 2018 8:08 AM
To: Hendry, Christopher
Subject: FW: EPP-Hatchery Meeting
Attachments: Section 8.2 EIS_EPP Outline.pdf

From: Kelly, Jason
Sent: Friday, September 7, 2018 3:20 PM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: FW: EPP-Hatchery Meeting

FYI and forwarding

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: September-07-18 2:49 PM
To: Hanchar, Dorothea; Ficzere, Vicki; Angelopoulos, John; Kelly, Jason; kawaja, jonathan; Adams, Blair; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Squires, Susan
Subject: EPP-Hatchery Meeting

Hi All,

The EPP meeting is scheduled from 9-11am, Tuesday, September 11, 2018. We'll be discussing Grieg NL's EPP Outline, presented in section 8.2 of the EIS, as it pertains to hatchery construction and operations. A copy of section 8.2 is attached. [REDACTED] and others from Grieg will be at the meeting, seeking direction from EAC/Gov officials as to the information required in the EPP. It may be helpful to look at the EIS review comments submitted by your respective departments to see if there were requirements for the EPP.

So far, Vicki, Dorothea, Daryl, Jason Kelly (DFO) and Susan have indicated their attendance for Tuesday's meeting. Allison will be available by phone if needed, but doesn't feel

Feel free to call me if you have any questions or concerns.

Regards,

Joanne

Joanne Sweeney
Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

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8.2 Environmental Protection Plan Outline

Grieg NL will submit a completed EPP for approval by the Minister of Municipal Affairs and Environment subsequent to the completion of the EIS and prior to the initiation of Project construction activities. An annotated Table of Contents of the EPP is provided here.

Preface

Distribution List — *Recipients of the approved EPP.*

Maintenance of the EPP — *Provides a record of document changes made by date and source.*

Revision Request Initiation Form — *Any user is encouraged to submit suggestions for changes and improvements to the EPP. A form is provided to assist those providing suggestions.*

Revision Control Record — *Identifies and records changes by date, source, and indicates approval of changed text.*

1.0 Introduction

1.1 Environmental Health and Safety Management System — *describes the Grieg NL policy on EH&S.*

1.1.1 Roles and Responsibilities— *Describes the management responsibility and accountability for implementation of EH&S policy.*

1.2 Purpose of the EPP— *Describes the EPP as a stand-alone document that targets the responsible company staff including front line workers, occupational health and safety staff, and environmental staff. The role of the document with respect to government environmental surveillance staff is also referenced. The scope of the EPP is designated as addressing specific project phases:- construction and operation and maintenance.*

1.3 Owners Policy— *Establishes a link between the EPP and the corporate policy on sustainability.*

1.4 Organization of the EPP— *Provides an overview of the sections of the document, and instructions for users.*

Describes the contents of the EPP, including:

- *proponent's environmental policies;*
- *environmental compliance monitoring;*
- *environmental protection measures;*
- *mitigation measures;*
- *permit application and approval planning;*
- *contingency planning for accidental and unplanned events;*
- *statutory requirements; and*
- *revision procedures and contact lists.*

1.5 Development and Implementation of the EPP— *Provides advice on the use of the EPP as a guide to taking appropriate environmental protection actions, and points out the series of task-specific Protection Measures.*

1.5.1 Site-specific Approach to EPP Development— *Describes the geographic-specific information that is utilized to direct EPP actions at each specified site. Includes items like Daily Environmental Meetings, Tool-box Meetings, and Employee Orientation.*

1.6 Environmental Orientation— *Describes the environmental orientation that is to be provided to all new employees as part of their job orientation.*

-
- 1.7 Project Description— *Provides a brief overview summary of the scope of the project, with a focus on the activities carried out to produce and market a quality product.*
 - 2.0 Environmental Concerns
 - 2.1 Construction Activity Environmental Concerns— *Lists the environmental interactions associated with this Project Phase, and the potential for unplanned events that could produce negative environmental effects.*
 - 2.2 Operation and Maintenance Environmental Concerns— *Lists the environmental interactions associated with this Project Phase, and the potential for unplanned events that could produce negative environmental effects. Decommissioning and Rehabilitation will be added to a revised EPP prior to initiation of this project Phase.*
 - 3.0 Environmental Protection Procedures
 - 3.1 Introduction— *Describes the template to be applied in describing the required measures to be employed with respect to identifiable Project activities.*
 - 3.2 Storage, Transportation, Transfer, Handling and Disposal of Fuel and Other Hazardous Substances
 - 3.3 Storage, Transportation, Handling and Dispensing of Fish Feed
 - 3.4 Sewage Disposal
 - 3.5 Storage, Transportation, Handling and Disposal of Solid Waste
 - 3.6 Equipment Use and Maintenance
 - 3.7 Noise Control
 - 3.8 Dust Control
 - 3.9 Protection of the Marine Environment
 - 3.10 Water Quality Monitoring
 - 3.11 Groundwater Development and Use
 - 3.12 Pumps and Generators
 - 3.13 Marine Traffic
 - 3.14 Vehicular Traffic
 - 3.15 Concrete Handling and Placing
 - 3.16 Storage, Handling and Dispensing of Therapeutants
 - 3.17 Storage, Transport, Handling and Disposal of Ensilage
 - 3.18 Storage, Handling and Disposal of Fish Mortalities
 - 4.0 Contingency Plans
 - 4.1 Introduction— *Identifies the plans applicable to unplanned events, their inter-relationship, and where each is located and accessible to employees.*
 - 4.2 Fuel or Hazardous Material Spills— *Refers to Spill Response Plan and Emergency Response Plan*
 - 4.3 Marine Mammal/ Wildlife Encounters— *Provides guidance on measures to take, resources available, regulatory issues, and mitigation measures.*
 - 4.4 Vessel Accidents— *Refers to Emergency Response Plan*
 - 4.5 Fires and Explosions— *Refers to Emergency Response Plan*
 - 4.6 Extreme Weather Events— *Refers to Emergency Response Plan*
 - Flooding
 - Ice
 - Wind/Waves
 - Storms
 - 5.0 Legislation, Permits and Authorizations— *Lists all relevant rules and regulations, as well as required permits and authorizations.*
 - 5.1 Legislation
-

-
- 5.2 Permits and Authorizations— *Refers to an Appendix which holds copies of all permits and authorizations, as well as terms and conditions and compliance records.*
 - 6.0 Contact List— *Provides a listing of corporate personnel, contractors, external resources, regulators, emergency contacts, and other advisory resources.*
 - 6.1 Emergency Numbers
 - 6.2 Advisory and Other Contact Numbers
 - 7.0 Resource Material
 - 7.1 Key Reference Material— *Identifies and, as appropriate includes as appendices, various guidelines and resource material relevant to environmental protection measures, mitigation and monitoring.*
 - 8.0 Site Specific Environmental Protection Plan— *Describes site-specific conditions, available resources, and relevant site activities to which EPP measures can apply.*
 - 8.1 RAS Hatchery
 - 8.1.1 Environmental Issues
 - 8.1.2 Environmental Protection Procedures
 - 8.1.3 Relevant Documents
 - 8.1.4 Permits, Approvals and Authorizations
 - 8.1.5 Compliance Monitoring Requirements
 - 8.2 Marine Sites (Sea Cage Sites, Crew Change Sites, Resupply Sites, Transit Routes)
 - 8.2.1 Environmental Issues
 - 8.2.2 Environmental Protection Procedures
 - 8.2.3 Relevant Documents
 - 8.2.4 Permits, Approvals and Authorizations
 - 8.2.5 Compliance Monitoring Requirements
- Appendices— *Includes a variety of resource material as identified during development of the EPP including – permits and conditions, contact lists, advisory resources, emergency contacts, and relevant literature.*

Hendry, Christopher

From: Hendry, Christopher
Sent: September-07-18 9:01 AM
To: Johnson, Roger
Subject: RE: Media lines
Attachments: Anticipatory Media Lines sept 6 draft CH.docx

See attached. I&T piece is a license.

From: Johnson, Roger
Sent: September-07-18 8:35 AM
To: Hendry, Christopher
Subject: FW: Media lines

Any obvious problems

Is the introductions and transfer piece a license or a permit – ah wordsmithing

From: Bieger, Tilman
Sent: Thursday, September 6, 2018 5:52 PM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: FW: Media lines

Thanks Roger and this is a good start

I have made a few recommended revisions – which also may change further tomorrow

From: Johnson, Roger
Sent: September-06-18 3:26 PM
To: Bieger, Tilman
Subject: Media lines

Here is my first crack at these revamped media lines.

I have talks planned with Sara D. in comms Friday am

I am not sure I like what I have written here and may totally change in AM

The telegram, VOCM and CBC websites are leading with this story – the telegram
<http://www.thetelegram.com/news/local/grieg-nls-placentia-bay-aquaculture-project-released-from-environmental-assessment-239173/> has some interesting positive commentary and a passing mention of federal advice

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

Anticipatory Media Lines

Environmental assessment of Grieg's proposed operation in Placentia Bay

Issue

In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in a court-ordered Environmental Impact Statement (EIS). As per normal provincial Environmental Assessment (EA) process, DFO has been asked to provide advice to the EA Committee. On September 6, 2018 the provincial Minister has found the Environmental Impact Statement to be acceptable and the provincial Cabinet has released the project from further Environmental Assessment EA.

Strategic Considerations and Public Environment

Grieg's proposed aquaculture operation in Placentia Bay has been under intense media scrutiny from the beginning due to criticism from anti-aquaculture groups.

Some disapproval may be redirected towards DFO by groups concerned that this project will damage wild Atlantic Salmon stocks, and who feel DFO should block the project. The Southern Newfoundland population of Atlantic Salmon has been assessed under COSEWIC as "threatened." This may add to concerns about the effects Grieg's activities will have on wild salmon.

Recommendation

These media lines are anticipatory if inquiries are received related to DFO's role in the Environmental Impact Statement process. Aquaculture is a provincial lead in NL; therefore, media will be referred to the province for questions outside of DFO's area of responsibility.

Media lines (Responsive)

- DFO has an advisory role in provincial Environment Assessments (EAs) processes. DFO routinely reviews provincial EA registrations, Environmental Preview Reports or, as in this case, Environmental Impact Statements, and in which the Department provides advice input relevant to our mandate of protecting Canada's oceans and other aquatic ecosystems from negative impacts.
- For the Grieg NL project in Placentia Bay, DFO-NL has concluded carried out a comprehensive review of the Grieg EIS, including a formal peer-review by Science personnel, and has provided related advice to the Provincial EA Committee.
- The Environmental Assessment process, is complete and the Province released the project with a number of conditions.
- The issues identified concerns expressed by DFO during the EIS review have been will be addressed either by the Provincial conditions of release or in and by the an accompanying subsequent Environmental Effects Monitoring Program that will be required for the project.
- The aquaculture industry in NL is governed by a mature and robust provincial and federal regulatory regime, under which aquaculture projects have to must implement many mitigation and precautionary and protection measures.
- The proponent Grieg NL will still be subject to subsequent need to obtain regulatory approvals for licences for the introduction and transfer of fish and for aquaculture sites and introductions

and transfers licenses, and introductions and transfers, both of which will involve require review and approval by DFO as well as and pProvincial regulatorsdepartments.

- ~~The Aquaculture industry in NL is regulated by a mature and robust regulatory process and this project like any other will have to comply with these regulations.~~
- ~~While DFO's responsibilities under the *Fisheries Act* contribute to sustainable aquaculture management, T-the decision to release thise aquaculture project from provincial environmental assessmentt, or not, lies exclusively with the Province of Newfoundland and Labrador. Contact tThe provincial Department of Municipal Affairs and Environment for morecan provide information on that decision and their role.~~

Parrill, Erika

From: Parrill, Erika
Sent: Friday, September 7, 2018 9:14 AM
To: Korchoski, Connie
Subject: RE: Grieg SRR

Dale's is 772-8892 ☺

><(((°>~><(((°>~><(((°>~><(((°>~><(((°>~><(((°>

Erika Parrill
Centre for Science Advice – NL Region

From: Korchoski, Connie
Sent: Friday, September 7, 2018 9:11 AM
To: Parrill, Erika <Erika.Parrill@dfo-mpo.gc.ca>
Subject: RE: Grieg SRR

Good morning.

Currently the SSR has Jims phone number listed on the citation page at the end. Which number will I change that to?

Connie

From: Parrill, Erika
Sent: 2018-September-06 4:10 PM
To: Korchoski, Connie
Subject: Grieg SRR

Hey Connie,

If you could accept the tracked changes of the Grieg SRR (both English and French), the SRR can now be sent to Laura for publication. Please cc Carole Grant and Dale when you send the Grieg SRR to Laura for publication.

Cheers,
Erika

><(((°>~><(((°>~><(((°>~><(((°>~><(((°>~><(((°>

Erika Parrill
Science Advice Liaison
Centre for Science Advice – NL Region
709-727-6309

Johnson, Roger

From: Johnson, Roger
Sent: Friday, September 7, 2018 9:49 AM
To: Dunderdale, Sara
Cc: Hendry, Christopher; Bieger, Tilman
Subject: Media lines Grieg
Attachments: Anticipatory Media Lines sept 6 draft RJ friday.docx

Please see the revised media lines for your review – could we arrange to have a chat on this today (AM hopefully)

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

Anticipatory Media Lines

Environmental assessment of Grieg's proposed operation in Placentia Bay

Issue

In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in a court-ordered Environmental Impact Statement (EIS). As per normal provincial EA process, DFO provided advice to the EA Committee. On September 6, 2018 the provincial Minister found the Environmental Impact Statement to be acceptable and the Provincial Cabinet released the project from further EA.

Strategic Considerations and Public Environment

Grieg's proposed aquaculture operation in Placentia Bay has been under intense media scrutiny from the beginning due to criticism from anti-aquaculture groups.

Some disapproval may be redirected towards DFO by groups concerned that this project will damage wild Atlantic Salmon stocks, and who feel DFO should block the project. The Southern Newfoundland population of Atlantic Salmon has been assessed under COSEWIC as "threatened." This may add to concerns about the effects Grieg's activities may have on wild salmon.

Recommendation

These media lines are anticipatory if inquiries are received related to DFO's role in the Environmental Impact Statement process. Aquaculture is a provincial lead in NL; therefore, media will be referred to the Province for questions outside of DFO's area of responsibility.

Media lines (Responsive)

- DFO often participates in provincial Environment Assessments (EAs), where it provides input relevant to its mandate.
- For the Grieg NL project in Placentia Bay, DFO-NL carried out a comprehensive review of the EIS, including a formal peer-review by Science personnel, and provided related advice to the Provincial EA Committee.
- Issues identified by DFO during the EIS review will be addressed by the Provincial conditions of release and by the subsequent Environmental Effects Monitoring Program that will be required for the project.
- The aquaculture industry in NL is governed by a mature and robust provincial and federal regulatory regime, under which aquaculture projects must implement many mitigation and protection measures.
- Grieg NL will still need to obtain licences for aquaculture sites and introductions and transfers, both of which will require review and approval by DFO and provincial departments.
- The decision to release this project from provincial environmental assessment lies exclusively with the Province of Newfoundland and Labrador. The provincial Department of Municipal Affairs and Environment can provide information on that decision and their role.
- DFO officials will continue to work with the province of NL to develop the follow up and monitoring requirements of the release of this project.

Johnson, Roger

From: Dunderdale, Sara
Sent: Friday, September 7, 2018 10:01 AM
To: Johnson, Roger
Cc: Hendry, Christopher; Bieger, Tilman
Subject: RE: Media lines Grieg

Hi Roger – I am at my desk and available for a call whenever you are ready.

From: Johnson, Roger
Sent: September-07-18 9:49 AM
To: Dunderdale, Sara
Cc: Hendry, Christopher; Bieger, Tilman
Subject: Media lines Grieg

Please see the revised media lines for your review – could we arrange to have a chat on this today (AM hopefully)

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

Johnson, Roger

From: Kelly, Jason
Sent: Friday, September 7, 2018 10:28 AM
To: Johnson, Roger
Subject: RE: Going forward on Grieg EPP etc

Popped out, you now there. I' in my cube all morning, you drop by before I call Joanne

From: Johnson, Roger
Sent: September-07-18 9:37 AM
To: Bieger, Tilman; Kelly, Jason
Subject: RE: Going forward on Grieg EPP etc

Yes bye – come out sometime this am for a chat

From: Bieger, Tilman
Sent: Friday, September 7, 2018 9:35 AM
To: Kelly, Jason <Jason.Kelly@dfo-mpo.gc.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: Re: Going forward on Grieg EPP etc

Yes that is good message and we need to clarify for Joanne and others for sure - will leave it to you and Roger to work out how to communicate. Thx

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Kelly, Jason
Sent: Friday, September 7, 2018 9:31 AM
To: Bieger, Tilman; Johnson, Roger
Subject: RE: Going forward on Grieg EPP etc

Sounds good. Since I was in contact with Joanne yesterday, perhaps I should touch base with her again and let her know that given the post EA phase AM will assume the lead role, to keep in line with other regulatory reviews of aquaculture projects.

That ok?

Jas

From: Bieger, Tilman
Sent: September-07-18 9:28 AM
To: Kelly, Jason; Johnson, Roger
Subject: Going forward on Grieg EPP etc

I recognize that FPP would normally coordinate our input into follow-up on an EA, and that we recently re-established that for the EA phase of the Grieg project. But in the interest of keeping some continuity in our dealings with the provincial EA folks, let's have Roger/Aquaculture Mgmt serve as the overall contact for DFO input on the post-EA phase for the Grieg project for the time being (including on the EPP and EEMP).

Roger can you please advise Joanne Sweeney etc to direct related requests for DFO input on Grieg to you. Your group will of course then arrange for review/input from Science, FM, FPP etc as needed to inform our responses.

Thanks for your adaptability and support as we continue to strive to provide high quality advice in a timely manner on this important project.

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]

Sent: September-06-18 3:56 PM

To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Sweeney, Joanne

Subject: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Good Afternoon,

[REDACTED] (Grieg NL) are requesting a meeting on Tuesday, September 11, 2018, to discuss the information requirements of the EPP. I'll pull together any references to the EPP in the EIS, EIS guidelines, recommendation, and release letter. I hope to forward those to you tomorrow. I'll send Perry and Knut links to EPPs on the EA web site for reference.

Please let me know if you are available to attend a meeting on Tuesday, and indicate whether morning or afternoon is preferable. It would be great if you could let me know by noon tomorrow (Friday, Sept 7).

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

"This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender."

s.19(1)

Korchoski, Connie

From: Korchoski, Connie
Sent: 2018-September-07 10:34 AM
To: Ferris, Laura
Cc: Grant, Carole; Richards, Dale E; Parrill, Erika
Subject: Submission for Publication - SRR - Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project

Good morning Laura.

The Science Response titled "Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project" has been uploaded to the NSD in the submission folder /NL/ SRR Grieg PG Aquaculture and is ready for publication.

Please let me know if any further edits are required.

Thanks and have a wonderful day!!

Connie

Regards,

Connie Korchoski
Centre for Science Advice
Newfoundland and Labrador Region
Fisheries and Oceans Canada
80 East White Hills Road, PO Box 5667, St. John's, NL A1C 5X1
Phone (709) 691-5882
E-mail / Courriel: connie.korchoski@dfo-mpo.gc.ca

Visit the Canadian Science Advisory Secretariat of DFO / Visitez le Secrétariat Canadien de Consultation Scientifique du MPO

<http://www.dfo-mpo.gc.ca/csas-sccs/>




Fisheries and Oceans
Canada


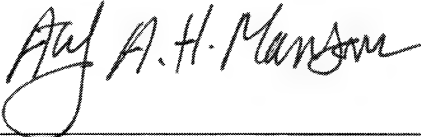

Pêches et Océans
Canada

Science Branch
PO Box 5667
St. John's NL A1C 5X1
Fax: 772-6100

SCIENCE RESPONSE REPORT – APPROVAL TRANSMITTAL

Originator	Position / Title	Signature	Date
D. Richards	Meeting Chair and Coordinator – CSA NL Region		June 29/18.

Comments: The content of the Science Response Report enclosed accurately reflects the discussions during the Regional Science Response Process held June 25th, 2018 in St. John's, NL.

Originator	Position / Title	Signature	Date
E. Parrill	Science Advice Liaison CSA NL Region		June 29 th /18
A. Mansour	Division Manager Environmental Sciences Division		June 29/2018
B. Davis	A/Regional Director Science Branch and Div. Manager Aquatic Resources		JUN 29 2018

Files enclosed:

DFO. 2018. Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project. DFO Can. Sci. Advis. Sec. Sci. Resp. 2018/nnn.



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Ecosystems and
Oceans Science

Sciences des écosystèmes
et des océans

Canadian Science Advisory Secretariat
Science Response 2018/045

Newfoundland and Labrador Region

REVIEW OF THE ENVIRONMENTAL IMPACT STATEMENT FOR THE PLACENTIA BAY ATLANTIC SALMON AQUACULTURE PROJECT

Context

The Proponent, Grieg NL Nurseries Ltd. and Grieg NL Seafarms Ltd. (referred to as Grieg NL), proposes to build and operate a land-based Recirculating Aquaculture System (RAS) Hatchery for Atlantic Salmon (*Salmo salar*) in Marystown, Newfoundland and Labrador (NL), and marine-based farms (11 sea cage sites) located in the northern portion of Placentia Bay, NL. A phased approach will be used to ramp-up production of salmon.

Grieg NL is required through the provincial environmental assessment process to prepare an Environmental Impact Statement (EIS) for the proposed Placentia Bay Atlantic Salmon Aquaculture Project. The EIS documents, including the Component Studies, were prepared pursuant to the NL *Environmental Protection Act* to comply with the EIS Guidelines prepared by representatives from Provincial and Federal government departments, including Fisheries and Oceans Canada (DFO). The purpose of the EIS is to identify and assess the significance of biophysical and socio-economic effects of the Project taking into consideration mitigation measures.

On May 30, 2018, the Fisheries Protection Program of the Ecosystems Management Branch in the NL Region of DFO requested that Science undertake a review of specific sections of the EIS for the proposed Placentia Bay Atlantic Salmon Aquaculture Project. DFO Science undertook a Science Response Process for this review. The information from this scientific review will be provided to Ecosystems Management to help form part of the Department's response to the overall adequacy of the EIS documents.

The objective of this review was to evaluate:

- The sufficiency of baseline data and appropriateness of methodologies to predict effects;
- The mitigation measures proposed by the Proponent;
- The level of certainty in the conclusions reached by the Proponent on the effects;
- The manner in which significance of the environmental effects, as they pertain to DFO's mandate, have been determined (i.e. the scientific merit of the information presented and the validity of the Proponent's methodologies and conclusions);
- The follow-up program proposed by the Proponent; and
- Whether additional information is required from the Proponent to complete the technical review.

The information required for this review can be found in a number of sections throughout the EIS report, and associated Component Studies and Appendices. The EIS documents are available on the Government of NL's Department of Municipal Affairs and Environment [website](#).

**Pages 2688 to / à 2712
are withheld pursuant to section
sont retenues en vertu de l'article**

68(a)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Bieger, Tilman

From: Bieger, Tilman
Sent: Friday, September 7, 2018 10:40 AM
To: Pike, Kelly J
Subject: Fw: AES input
Attachments: Week of Sept. 10, 2018-AES issues Reports and Consultations Report (Re Greig Update v.1).docx

Kelly can u pls review before fwing to Ray.

If I need to sign transmittal or anything as acting RD let me know, I could come in.

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Tilman Bieger
Sent: Friday, September 7, 2018 10:33 AM
To: Bieger, Tilman
Subject: Fw: AES input

From: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>
Sent: September 7, 2018 10:11 AM
To: Tilman Bieger
Subject: Fw: AES input

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>
Sent: Friday, September 7, 2018 10:00 AM
To: Bieger, Tilman
Subject: AES input

For your review.

s.19(1)

TAB 10 - UPCOMING ISSUES AND DECISIONS / ONGLET 10 – PROCHAINS ENJEUX ET DÉCISIONS

SECRET

#	ISSUE / PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
Aquatic Ecosystems Sector / Secteur des écosystèmes aquatiques – September 17th to September 28th / du 17 septembre au 28 septembre				
	UPDATE - Grieg NL Placentia Bay Aquaculture Project	<p>On September 5th, 2018 the NL Department of Municipal Affairs and Environment (MAE) released the salmon aquaculture project proposed by Grieg NL in Placentia Bay from further environmental assessment.</p> <p>This release is subject to numerous and conditions requiring various mitigations and monitoring measures to be implemented, including measures related to preventing and responding to possible escapes of farm fish, and ensuring the effectiveness of procedures to sterilize farm fish.</p> <p>This decision is aligned with previous decisions by federal departments (including DFO and Environment and Climate Change Canada) that risks associated with this project could be effectively managed under the regulatory regime governing aquaculture.</p> <p>As part of the provincial environmental assessment for the project, DFO carried out a scientific review of the environmental impact statement (EIS) for the project. The Department is expecting to publish this scientific review, which included some criticisms of the EIS, in the near future.</p>	<p>Environmental groups opposed to the project have expressed concerns that the project could harm wild Atlantic Salmon stocks, and feel the Department should block the project. They may criticize the decision to release the project from EA, and question the scientific advice provided by DFO during the assessment.</p>	<p>Media lines have been prepared in the event that DFO receives inquiries on this issue. They emphasize that the decision to release the project lies exclusively with the Province of Newfoundland and Labrador.</p> <p>Regional departmental personnel will continue to liaise with provincial officials to help ensure that appropriate precautionary and protective measures are effectively implemented through the various regulatory approvals the project will require to proceed.</p>

Hendry, Christopher

From: Hendry, Christopher
Sent: September-07-18 10:51 AM
To: Johnson, Roger
Subject: FW: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: September-07-18 10:51 AM
To: kawaja, jonathan
Cc: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca)
Subject: RE: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Yes, the discussion Tuesday will be focused on the EPP required for hatchery construction, and the EPP required for hatchery operations

Joanne
Tel. (709) 729-2822

From: kawaja, jonathan
Sent: Friday, September 7, 2018 10:26 AM
To: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Cc: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Hendry, Christopher (Christopher.Hendry@dfo-mpo.gc.ca) <Christopher.Hendry@dfo-mpo.gc.ca>; carole.grant@dfo-mpo.gc.ca; Adams, Blair <BlairAdams@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelan@gov.nl.ca>; Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA) <Jerry.Pulchan@EC.GC.CA>; Denning, Allison (HC/SC) (allison.denning@canada.ca) <allison.denning@canada.ca>
Subject: RE: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Hi Joanne,

Do you expect this discussion to focus on the EPP for the Hatchery?

Jonathan Kawaja
Environmental Scientist (Aquaculture)
Aquaculture Development
Department of Fisheries and Land Resources
58 Hardy Ave, Grand Falls-Windsor, NL
A2A 2K2

Ph 709.292.4104
Fax 709.292.4113

From: Sweeney, Joanne
Sent: Thursday, September 06, 2018 3:56 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Hendry, Christopher (Christopher.Hendry@dfo-mpo.gc.ca);

carole.grant@dfo-mpo.gc.ca; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Sweeney, Joanne

Subject: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Good Afternoon,

[REDACTED] (Grieg NL) are requesting a meeting on Tuesday, September 11, 2018, to discuss the information requirements of the EPP. I'll pull together any references to the EPP in the EIS, EIS guidelines, recommendation, and release letter. I hope to forward those to you tomorrow. I'll send Perry and Knut links to EPPs on the EA web site for reference.

Please let me know if you are available to attend a meeting on Tuesday, and indicate whether morning or afternoon is preferable. It would be great if you could let me know by noon tomorrow (Friday, Sept 7).

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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s.19(1)


Bieger, Tilman

From: Bieger, Tilman
Sent: Friday, September 7, 2018 11:26 AM
To: Kelly, Jason; Johnson, Roger
Subject: Fw: Grieg EA follow up

Fyi stay tuned

Sent from my BlackBerry 10 smartphone on the Bell network.

From: tilman.bieger@dfo-mpo.gc.ca
Sent: Friday, September 7, 2018 11:25 AM
To: Ben Davis; McCallum, Barry
Subject: Grieg EA follow up

Hello Barry, Ben. Could one of you give me a quick call on cell if u have time when your mtg wraps up this AM please? 

Thanks

Tilman

Sent from my BlackBerry 10 smartphone on the Bell network.

s.16(2)(c)

Bieger, Tilman

From: Bieger, Tilman
Sent: Friday, September 7, 2018 12:48 PM
To: Johnson, Roger; Kelly, Jason
Subject: Grieg going fwd

I have not connected with Barry or Ben yet.

Just FYI below is the msg I sent a while back to have correspondence/requests for advice routed through FPP. It referenced "related to the EIS" specifically at that time - but same principle applies now.

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>
Sent: Monday, August 13, 2018 6:19 PM
To: Sweeney, Joanne
Cc: Squires, Susan; Johnson, Roger; Grant, Carole; Decker, Shelley; Pilgrim, Bret; Griffiths, Helen
Subject: Re: DFO direction requested

Hello Joanne.

Helen Griffiths, as the Manager of the Fisheries Protection Program - Regulatory Review, will follow up on this message with you tomorrow.

To avoid confusion, I encourage you to please direct all correspondence related to the EIS for the Grieg project to Helen as the single point of contact for DFO for that issue.

Thanks.

Tilman Bieger
A/Regional Director, Ecosystems Management - NL

Sent from my BlackBerry 10 smartphone on the Bell network.

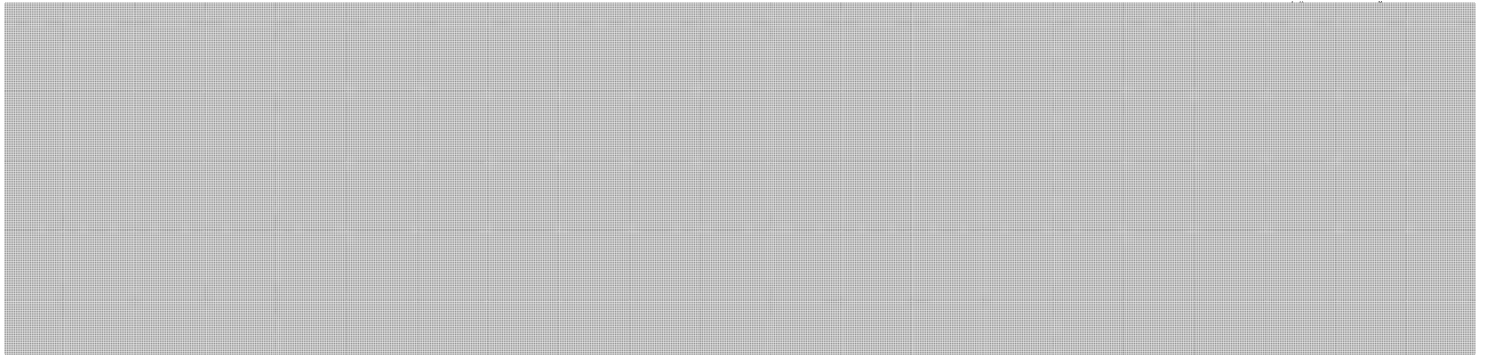
From: Sweeney, Joanne
Sent: Monday, August 13, 2018 6:01 PM
To: Griffiths, Helen; Bieger, Tilman; Pilgrim, Bret; Decker, Shelley; Johnson, Roger; Grant, Carole
Cc: Squires, Susan
Subject: DFO direction requested

Hi All,

Clarification is requested on the following comment in DFO's August 10, 2018 letter to the EA Director (attached) regarding the EIS review:

"We remain of the view that additional information should be provided about the potential ecological impacts (such as through predation or competition) that an escape of a large number of farm salmon could have on wild populations of

commercial and non-commercial fish in Placentia Bay, including Atlantic Salmon. We defer to the EA Committee and officials of your department to decide if and how this should be achieved."



I look forward to your response.

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

"This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender."

s.13(1)(c)

Bieger, Tilman

From: Bieger, Tilman
Sent: Friday, September 7, 2018 1:10 PM
To: Guest, Kevin (NL)
Subject: Re: FOR APPROVAL: Grieg Media Lines

Perfect tx

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Guest, Kevin (NL)
Sent: Friday, September 7, 2018 12:55 PM
To: Bieger, Tilman; Johnson, Roger
Subject: RE: FOR APPROVAL: Grieg Media Lines

Hi Tilman,

Once we get regional approved we will then provide to NHQ for approval and then they will go to MINO for final sign off.

Cheers,
Kevin

Kevin Guest
Communications Advisor (Fisheries Management)
Fisheries and Oceans Canada/Government of Canada
Kevin.Guest2@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

Follow us on Twitter! @DFO_NL

Like us on Facebook

From: Bieger, Tilman
Sent: September-07-18 12:39 PM
To: Guest, Kevin (NL); Johnson, Roger
Subject: Re: FOR APPROVAL: Grieg Media Lines

Have we sought input from NHQ? I seem to recall in past these had to be approved nationally

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Guest, Kevin (NL)
Sent: Friday, September 7, 2018 12:30 PM
To: Bieger, Tilman
Cc: Johnson, Roger
Subject: RE: FOR APPROVAL: Grieg Media Lines

Great. Thanks, Tilman.

Cheers,
Kevin

Kevin Guest
Communications Advisor (Fisheries Management)
Fisheries and Oceans Canada/Government of Canada
Kevin.Guest2@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

Follow us on Twitter! @DFO_NL

Like us on Facebook

From: Bieger, Tilman
Sent: September-07-18 12:27 PM
To: Guest, Kevin (NL)
Cc: Johnson, Roger
Subject: Re: FOR APPROVAL: Grieg Media Lines

Thanks

These are fine, [REDACTED]

s.19(1)
s.21(1)(b)

A couple minor edits recommended in red

Tilman Bieger
Acting RD-EM, NL

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Guest, Kevin (NL)
Sent: Friday, September 7, 2018 11:52 AM
To: Bieger, Tilman
Cc: Johnson, Roger
Subject: FOR APPROVAL: Grieg Media Lines

Hi Tilman,

Please see below anticipatory media lines for your approval on the environmental assessment for Grieg's proposed operation.

Cheers,
Kevin

Anticipatory Media Lines
Environmental assessment of Grieg's proposed operation in Placentia Bay

Issue

In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in a court-ordered Environmental Impact Statement (EIS). As per normal provincial EA process, DFO provided advice to the EA Committee. On September 6, 2018 the provincial Minister found the Environmental Impact Statement to be acceptable and the Provincial Cabinet released the project from further EA.

Recommendation

These media lines are anticipatory if inquiries are received related to DFO's role in the Environmental Impact Statement process. Aquaculture is a provincial lead in NL; therefore, media will be referred to the Province for questions outside of DFO's area of responsibility.

Media lines (Responsive)

- DFO often participates in provincial Environment Assessments (EAs), where it provides input relevant to its mandate.
- For the Grieg NL project in Placentia Bay, DFO-NL carried out a comprehensive review of the EIS, including a formal peer-review by Science personnel, and provided related advice to the Provincial EA Committee.
- Issues identified by DFO during the EIS review will be addressed by the Provincial conditions of release and by the Environmental Protection Plan and Environmental Effects Monitoring Program that will be required for the project.
- The aquaculture industry in NL is governed by a mature and robust provincial and federal regulatory regime, under which aquaculture projects must implement many mitigation and protection measures.
- Grieg NL will still need to obtain licences for aquaculture sites and introductions and transfers, both of which will require review and approval by DFO and provincial departments.
- The decision to release this project from provincial environmental assessment lies exclusively with the Province of Newfoundland and Labrador. The provincial Department of Municipal Affairs and Environment can provide information on that decision and their role.
- DFO officials will continue to work with the Province of NL to develop the follow up and monitoring requirements of the release of this project.

Kevin Guest

Communications Advisor (Fisheries Management)

Fisheries and Oceans Canada/Government of Canada

Kevin.Guest2@dfo-mpo.gc.ca/Tel: 709-772-7633

Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

Follow us on Twitter! @DFO_NL

Like us on Facebook

Finn, Ray

From: Bieger, Tilman
Sent: Friday, September 7, 2018 3:41 PM
To: Finn, Ray
Subject: Fw: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

FYI

We will continue to make sure that Science and other sectors/programs in DFO are properly engaged in the development of advice we provide to the Province for this project.

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>
Sent: Friday, September 7, 2018 3:35 PM
To: 'Sweeney, Joanne'
Cc: Johnson, Roger; Kelly, Jason
Subject: Fw: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Hello Joanne

As we discussed, and in line with our normal approach to participating in provincial EA activities, we would like to continue with a single contact going forward for requests for information or advice your group may have related to the Grieg NL project. Roger Johnson (currently acting as Regional Manager for Aquaculture Management) will serve as that single window into DFO for the time being. If you could please direct requests to him, he will make sure that input from various DFO sectors/programs is incorporated in the advice our Department provides to you. Please follow up with Roger if you have any questions.

Regards,

Tilman Bieger
Acting Regional Director - Ecosystem Management, NL

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Sweeney, Joanne [mailto:joannesweeney@gov.nl.ca]
Sent: September-06-18 3:56 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Sweeney, Joanne
Subject: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Good Afternoon,

[REDACTED] (Grieg NL) are requesting a meeting on Tuesday, September 11, 2018, to discuss the information requirements of the EPP. I'll pull together any references to the EPP in the EIS, EIS guidelines, recommendation, and release letter. I hope to forward those to you tomorrow. I'll send Perry and Knut links to EPPs on the EA web site for reference.

Please let me know if you are available to attend a meeting on Tuesday, and indicate whether morning or afternoon is preferable. It would be great if you could let me know by noon tomorrow (Friday, Sept 7).

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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s.19(1)

Pike, Kelly J

From: Pike, Kelly J
Sent: Friday, September 7, 2018 3:56 PM
To: Genier, Sylvie
Cc: Butler, Annette; Finn, Ray; Bieger, Tilman; Kelly, Jason; Griffiths, Helen; Johnson, Roger
Subject: RE: Week of September 10th - AES Issues, Reports and Consultations Report / Upcoming Decisions
Attachments: A-RDG Approval - EM NL Region Tab 10 Issues Report - September 7, 2018.pdf; Week of Sept. 10, 2018-AES issues Reports and Consultations Report (Re G....docx

Sylvie,

Please find attached RDG approved AES input from NL Region.

Thanks,

Kelly

From: Genier, Sylvie
Sent: Wednesday, September 5, 2018 3:24 PM
To: Butler, Annette <Annette.Butler@dfo-mpo.gc.ca>; Cochrane, Kim <Kim.Cochrane@dfo-mpo.gc.ca>; Hickson, Cindy <Cindy.Hickson@dfo-mpo.gc.ca>; Rossignol, Pauline <Pauline.Rossignol@dfo-mpo.gc.ca>; Wilson, Teresa M <Teresa.Wilson@dfo-mpo.gc.ca>; XCA-Grp, RDGO <XCA-Grp-RDGO@dfo-mpo.gc.ca>; Johal, Sharan <Sharan.Johal@dfo-mpo.gc.ca>; Hébert, Linda M <Linda.Hebert@dfo-mpo.gc.ca>; Pallard, Jessica <Jessica.Pallard@dfo-mpo.gc.ca>; Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Couturier-Dubé, Geneviève <Genevieve.Couturier-Dube@dfo-mpo.gc.ca>; Kaba, Kyle <Kyle.Kaba@dfo-mpo.gc.ca>; Landry, Anne <Anne.Landry@dfo-mpo.gc.ca>
Cc: Daspe, Caroline <Caroline.Daspe@dfo-mpo.gc.ca>
Subject: Week of September 10th - AES Issues, Reports and Consultations Report / Upcoming Decisions
Importance: High

Hi all / Bonjour,

**Please note this request is for items pertaining to Aquatic Ecosystems Sector only /
Veuillez noter que cette demande concerne uniquement les articles appartenant au secteur des écosystèmes aquatiques**

Please update (in the language of your choice) the attached report with a regional perspective and return to me **by 10am on Monday, September 10th (Eastern Time).**

Please note if no response is received by the timeline provided, it will be considered a NIL response.

Please note this request is for the period of September 17th to September 28th

Veuillez fournir vos données (dans la langue de votre choix), incluant la perspective régionale pour le rapport ci-joint **par 10h00 lundi le 10 septembre. (heure de l'est).**

S'il vous plaît noter si aucune réponse n'est reçue par le temps fourni, il sera considéré comme une réponse NUL.

SVP noter que cette demande est pour la période du 17 septembre au 28 septembre

Thank you/Merci.

Sylvie Genier

Scheduling Coordinator / Coordinatrice de l'agenda

Senior Assistant Deputy Minister / Bureau du sous-ministre adjoint

Ecosystems & Fisheries Management / Écosystèmes et Gestion de Pêches

613-993-2734

=====

Guidelines for Issues, Reports & Consultations report / Lignes directrices pour le rapport d'enjeux, de rapports et de consultations:

Issues expected for the next two weeks (from September 17 – September 28, 2018)

Enjeux prévus pour les prochaines deux semaines (à partir du 17 septembre – 28 septembre 2018)

Anticipated reports, studies, publications, etc. Please identify any reports expected for public release whether they are from DFO or from others but with implications for DFO (to be released before **September 28, 2018**).

Rapports anticipés, études, publications, etc. Veuillez identifier tous les rapports en attente pour publication - même s'il s'agit d'un rapport du MPO ou provenant d'autres organismes avec des implications pour le MPO (date de publication avant le **28 septembre 2018**).

Meetings/consultation planned for September 17 – September 28, 2018

Rencontres/consultations prévues pendant la période à partir du 17 septembre – 28 septembre 2018

Please provide **ONLY** information that the Minister and/or Minister's Office should be made aware of because of the potential for it to attract public or media attention. For issues, please explain why it is an issue, anticipated reaction and plans to manage the reaction. Please ensure your input is signed off by your DMB member.

When you transmit the info, please indicate which issues, reports or consultations should be included in the Week at a Glance - these are the same issues that the Commissioner or SADM will be raising during the Round Table.

Veuillez fournir uniquement les renseignements dont le ministre ou le bureau du ministre devraient prendre connaissance parce qu'ils peuvent potentiellement attirer l'attention du public ou des médias. En ce qui concerne les enjeux, veuillez expliquer pourquoi il s'agit d'un enjeu, quelle est la réaction anticipée et quels sont les plans devant servir à gérer cette réaction. Veuillez-vous assurer que votre contribution est signée par votre membre du Conseil du ministère.


Lorsque vous transmettez les renseignements, veuillez indiquer quels enjeux, rapports ou consultations devraient être inclus dans le Coup d'œil sur la semaine – ceux-ci correspondent aux enjeux que le Commissaire ou le Sous-ministre adjoint principal soulèveront durant la table-ronde.

Best available copy


**TAB 10 - UPCOMING ISSUES AND DECISIONS /
ONGLET 10 - PROCHAINS ENJEUX ET DÉCISIONS**

SECRET

#	ISSUE /PROBLÈME	DESCRIPTION	IMPACT / EFFET	NEXT STEPS / STATUS PROCHAINES ÉTAPES / SITUATION
Aquatic Ecosystems Sector / Secteur des écosystèmes aquatiques – September 17th to September 28th / du 17 septembre au 28 septembre				
UPDATE - Grieg NL Placentia Bay Aquaculture Project	On September 5 th , 2018 the NL Department of Municipal Affairs and Environment (MAE) released the salmon aquaculture project proposed by Grieg NL in Placentia Bay from further environmental assessment. This release is subject to numerous conditions requiring various mitigations and monitoring measures to be implemented, including measures related to preventing and responding to possible escapes of farm fish, and ensuring the effectiveness of procedures to sterilize farm fish. This provincial decision is aligned with previous decisions by federal departments (including DFO and Environment and Climate Change Canada) that risks associated with this project could be effectively managed under the regulatory regime governing aquaculture. As part of the provincial environmental assessment for the project, DFO carried out a scientific review of the environmental impact statement (EIS) for the project. The Department is expecting to publish this scientific review, which included some criticisms of the EIS, in the near future.	Environmental groups opposed to the project have expressed concerns that the project could harm wild Atlantic Salmon stocks, and feel the Department should block the project. They may criticize the decision to release the project from EA, and question the scientific advice provided by DFO during the assessment.	Media lines have been prepared in the event that DFO receives inquiries on this issue. They emphasize that the decision to release the project lies exclusively with the Province of Newfoundland and Labrador. Regional departmental personnel will continue to liaise with provincial officials to help ensure that appropriate precautionary and protective measures are effectively implemented through the various regulatory approvals the project will require to proceed.	


Approved by:
R. D. Finn, Regional Director
Ecosystems Management

SEP 06 2018


Approved by Ray Finn
Acting Regional Director General
Newfoundland & Labrador Region

Date:

SEP 7 2018

Finn, Ray

From: Bieger, Tilman
Sent: Friday, September 7, 2018 4:13 PM
To: Finn, Ray
Subject: Fw: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Response from Joanne Sweeney

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: Friday, September 7, 2018 3:39 PM
To: Bieger, Tilman
Cc: Johnson, Roger; Kelly, Jason; Squires, Susan
Subject: RE: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Thank you for the clarification Tilman. All future correspondence to DFO will be forwarded to Roger as the single point of contact with DFO, as requested.

Regards,

Joanne

Joanne Sweeney

Environmental Assessment Division
Department of Municipal Affairs and Environment
PO Box 8700, St. John's NL A1B 4J6
Tel. (709) 729-2822

From: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>
Sent: Friday, September 7, 2018 3:36 PM
To: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Cc: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>; Kelly, Jason <Jason.Kelly@dfo-mpo.gc.ca>
Subject: Fw: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Hello Joanne

As we discussed, and in line with our normal approach to participating in provincial EA activities, we would like to continue with a single contact going forward for requests for information or advice your group may have related to the Grieg NL project. Roger Johnson (currently acting as Regional Manager for Aquaculture Management) will serve as that single window into DFO for the time being. If you could please direct requests to him, he will make sure that input from various DFO sectors/programs is incorporated in the advice our Department provides to you. Please follow up with Roger if you have any questions.


Regards,

Tilman Bieger
Acting Regional Director - Ecosystem Management, NL

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: September-06-18 3:56 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Sweeney, Joanne
Subject: Grieg requests EPP meeting, Tuesday, Sept 11, 2018

Good Afternoon,

 (Grieg NL) are requesting a meeting on Tuesday, September 11, 2018, to discuss the information requirements of the EPP. I'll pull together any references to the EPP in the EIS, EIS guidelines, recommendation, and release letter. I hope to forward those to you tomorrow. I'll send Perry and Knut links to EPPs on the EA web site for reference.

Please let me know if you are available to attend a meeting on Tuesday, and indicate whether morning or afternoon is preferable. It would be great if you could let me know by noon tomorrow (Friday, Sept 7).

Regards,

Joanne

Joanne Sweeney
Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

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s.19(1)

Johnson, Roger

From: Hendry, Christopher
Sent: Monday, September 10, 2018 8:55 AM
To: Johnson, Roger
Subject: RE: EPP-Hatchery Meeting

Are we also attending?

From: Johnson, Roger
Sent: September-10-18 8:08 AM
To: Hendry, Christopher
Subject: FW: EPP-Hatchery Meeting

From: Kelly, Jason
Sent: Friday, September 7, 2018 3:20 PM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: FW: EPP-Hatchery Meeting

FYI and forwarding

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: September-07-18 2:49 PM
To: Hanchar, Dorothea; Ficzer, Vicki; Angelopoulos, John; Kelly, Jason; kawaja, jonathan; Adams, Blair; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Squires, Susan
Subject: EPP-Hatchery Meeting

Hi All,

The EPP meeting is scheduled from 9-11am, Tuesday, September 11, 2018. We'll be discussing Grieg NL's EPP Outline, presented in section 8.2 of the EIS, as it pertains to hatchery construction and operations. A copy of section 8.2 is attached. [REDACTED] and others from Grieg will be at the meeting, seeking direction from EAC/Gov officials as to the information required in the EPP. It may be helpful to look at the EIS review comments submitted by your respective departments to see if there were requirements for the EPP.

So far, Vicki, Dorothea, Daryl, Jason Kelly (DFO) and Susan have indicated their attendance for Tuesday's meeting. Allison will be available by phone if needed, but doesn't feel

Feel free to call me if you have any questions or concerns.

Regards,

Joanne

s.19(1)

Joanne Sweeney
Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

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No information has been removed or severed from this page

Johnson, Roger

From: Johnson, Roger
Sent: Monday, September 10, 2018 11:27 AM
To: Grant, Carole
Subject: FW: EPP-Hatchery Meeting, Sept 11, 2018
Attachments: 1834_EAC_EIS review comments for proponent.pdf

FYI

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: Monday, September 10, 2018 9:40 AM
To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelan@gov.nl.ca>; Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA) <Jerry.Pulchan@EC.GC.CA>; Denning, Allison (HC/SC) (allison.denning@canada.ca) <allison.denning@canada.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Cc: Squires, Susan <SusanSquires@gov.nl.ca>
Subject: RE: EPP-Hatchery Meeting, Sept 11, 2018

Good Morning All,

As you know, the EA Committee will be meeting with Grieg NL tomorrow morning to discuss the information requirements for the hatchery EPP. I've attached the consolidated government agency comments from the EIS review, for your convenience, so that you may have a look at the comments provided by your respective departments to identify any EPP requirements for the hatchery construction and operations. This is an opportunity to clarify for the proponent, the information your department is expecting to be included in the hatchery EPP.

The following members have indicated their attendance at tomorrow's meeting :

Dorothea Hanchar
Vicki Ficzero
Jonathan Kawaja
Blair Adams (skype)
Daryl Whelan
Roger Johnson (single contact for DFO EAC members)
Allison Denning (skype)

Melissa Ginn (Transport Canada) has indicated that she will not be attending the meeting as TC has no requirements for the hatchery EPP.

To date, I do not have a response from TCII or ECCC regarding meeting attendance. In that regard John and Jerry, if you cannot attend the meeting and have guidance for the proponent regarding the hatchery EPP information requirements from your respective departments, please forward the information to me today and I will provide it to Grieg NL.

I've provided Grieg NL with the following links to the gov NL website, for EPP's from other projects that have been released from EA :

Diversion and Dewatering of Luce Lake North, Labrador West

(1810) http://www.mae.gov.nl.ca/env_assessment/projects/Y2015/1810/index.html

St. Lawrence AGS Vein Fluorspar Mine

(1794) http://www.mae.gov.nl.ca/env_assessment/projects/Y2015/1794/index.html

Labrador - Island Transmission Link
(1407)

http://www.mae.gov.nl.ca/env_assessment/projects/Y2010/1407/index.html

Keep in mind that the EPP we will be discussing tomorrow is for **hatchery construction only**. This EPP will have to be submitted to the EAC chair for review by the government departments and agencies represented on the EA Committee, for recommendation and approval by the MAE Minister prior to the commencement of construction activities. The EPP is expected to be a standalone document intended for Grieg NL personnel, contractors, subcontractors, and government personnel responsible for surveillance, that clearly identifies environmental protection procedures for hatchery construction.

Please call me at (709) 729-2822 or send me an email if you have any questions or concerns.

Regards,

Joanne

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]

Sent: Friday, September 07, 2018 2:49 PM

To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; 'Kelly, Jason' <Jason.Kelly@dfo-mpo.gc.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelan@gov.nl.ca>; Ginn, Melissa <melissa.ginn@tc.gc.ca>; Pulchan, Jerry [St. John's] <Jerry.Pulchan@EC.GC.CA> <Jerry.Pulchan@EC.GC.CA>; Denning, Allison (HC/SC) <allison.denning@canada.ca> <allison.denning@canada.ca>; Squires, Susan <SusanSquires@gov.nl.ca>

Subject: EPP-Hatchery Meeting

Hi All,

The EPP meeting is scheduled from 9-11am, Tuesday, September 11, 2018. We'll be discussing Grieg NL's EPP Outline, presented in section 8.2 of the EIS, as it pertains to hatchery construction and operations. A copy of section 8.2 is attached. [REDACTED] and others from Grieg will be at the meeting, seeking direction from EAC/Gov officials as to the information required in the EPP. It may be helpful to look at the EIS review comments submitted by your respective departments to see if there were requirements for the EPP.

So far, Vicki, Dorothea, Daryl, Jason Kelly (DFO) and Susan have indicated their attendance for Tuesday's meeting. Allison will be available by phone if needed, but doesn't feel

Feel free to call me if you have any questions or concerns.

Regards,

s.19(1)

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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No information has been removed or severed from this page

**Pages 2735 to / à 2853
are duplicates of
sont des duplicatas des
pages 2535 to / à 2653**

Johnson, Roger

From: Johnson, Roger
Sent: Monday, September 10, 2018 11:27 AM
To: Grant, Carole
Cc: Hendry, Christopher
Subject: FW: EPP MEETING TUES, SEPT 11 - POSTPONED UNTIL FURTHER NOTICE

FYI

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: Monday, September 10, 2018 10:52 AM
To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelehan@gov.nl.ca>; Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA) <Jerry.Pulchan@EC.GC.CA>; Denning, Allison (HC/SC) (allison.denning@canada.ca) <allison.denning@canada.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Cc: Squires, Susan <SusanSquires@gov.nl.ca>; [REDACTED]
Subject: EPP MEETING TUES, SEPT 11 - POSTPONED UNTIL FURTHER NOTICE

Please be advised that the above-noted meeting has been postponed until further notice, at the request of Grieg NL. Grieg NL has identified that additional time is needed to prepare for the EPP meeting, and will propose a new meeting date in the upcoming days.

I thank you for making yourselves available on such short notice and will keep you informed of the proposed new meeting date, once it becomes available from Grieg NL.

Please call or send me an email if you have any questions or concerns.

Regards,

Joanne

Joanne Sweeney

Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

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s.19(1)

Johnson, Roger

From: Johnson, Roger
Sent: Monday, September 10, 2018 2:00 PM
To: Hendry, Christopher; Mallay, James G
Subject: reschedule meeting

How's about we have our tomorrow pm meeting at 1430 hrs today – since our conference call got cancelled and [REDACTED]
[REDACTED]

Collaborative space

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

s.19(1)

s.21(1)(b)

Johnson, Roger

From: Johnson, Roger
Sent: Tuesday, September 11, 2018 7:53 AM
To: Bieger, Tilman
Cc: Hendry, Christopher; Mallay, James G
Subject: FW: Grieg

This was also the subject of the entire fisheries Broadcast yesterday mostly pro but some con from salmonid association

From: Mallay, James G
Sent: Monday, September 10, 2018 3:54 PM
To: Hendry, Christopher <Christopher.Hendry@dfo-mpo.gc.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: Grieg

<https://www.cbc.ca/news/canada/newfoundland-labrador/grieg-government-partnership-1.4817231>

Jim Mallay, B.Comm

Regional Aquaculture Management Officer
Fisheries and Oceans Canada/Government of Canada
james.mallay@dfo-mpo.gc.ca / Tel: 709 772-3265



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada

Johnson, Roger

From: Johnson, Roger
Sent: Tuesday, September 11, 2018 8:37 AM
To: Ruddock, Stella D
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project

Thanks Stella.

The only outstanding issue is Kevin Guest was asked by Tilman to get input/approval from NHQ RE: Final Media Lines – just wondering where that is.

As you may have noticed while there is a considerable amount of media on this issue (entire Broadcast yesterday) much of it has been positive and well handled by the province. However, I would not discount further enquires on this issue.

From: Ruddock, Stella D
Sent: Tuesday, September 11, 2018 8:27 AM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: RE: Placentia Bay Atlantic Salmon Aquaculture Project

Hi Roger,

 but back today. Let me know if and when you'd like to chat.

Thanks,
Stella

From: Johnson, Roger
Sent: September-06-18 11:09 AM
To: Dunderdale, Sara; Ruddock, Stella D
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project

We will need to talk about this sometime

From: Hendry, Christopher
Sent: Thursday, September 6, 2018 10:50 AM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: September-06-18 10:46 AM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
Cc: Squires, Susan
Subject: Placentia Bay Atlantic Salmon Aquaculture Project

s.19(1)

Please see the attached letters advising the proponent of the Minister's decision regarding the acceptability of the EIS, and the Lieutenant Governor on Council's decision regarding the acceptability of the project. Updated project information will be available this afternoon on the Department of Municipal Affairs and Environment web page at the following link:

http://www.mae.gov.nl.ca/env_assessment/projects/Y2016/1834/index.html

Public notice of the decisions will be posted on the Government of Newfoundland and Labrador "News Releases" web page this afternoon, at the following link: <http://www.releases.gov.nl.ca/>.

I anticipate the proponent will request a meeting in the near future to discuss the requirements of the EEMP and EPP. I will contact the appropriate EAC members to arrange a meeting date.

I thank you for your participation on the environmental assessment committee and for your dedication to this file. If you have any questions or concerns please feel free to call me at 729-2822.

Best regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

"This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender."

Richards, Dale E

From: Duff, Jennifer L
Sent: September-11-18 9:01 AM
To: Richards, Dale E
Cc: Parrill, Erika; Ruddock, Stella D
Subject: RE: Submission for Publication - SRR - Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: Untitled

Hello again,

I should have shared the attached lines with you that were sent to HQ on Friday. These lines were approved by Tilman and Ray last week.

Thanks,

Jen

From: Duff, Jennifer L
Sent: September-11-18 8:45 AM
To: Richards, Dale E
Cc: Parrill, Erika; Ruddock, Stella D
Subject: RE: Submission for Publication - SRR - Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project

Hello,

I was out of the office yesterday, but if you would like to discuss today, let me know.

Thanks,

Jen

Jen Rosa-Bian (Duff)
Communications Advisor (Science)
Fisheries and Oceans Canada/Government of Canada
jennifer.duff@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

Follow us on Twitter! @DFO_NL

From: Richards, Dale E
Sent: September-07-18 4:25 PM
To: Duff, Jennifer L
Cc: Parrill, Erika
Subject: TR: Submission for Publication - SRR - Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project

Hi Jen,
Please see below. We will have to discuss the publication of this CSAS report and how to develop MLs with Ecosystems Mgmt. Just sending an email to remind us both.

Dale

De : Richards, Dale E
Envoyé : September-07-18 4:20 PM
À : Foster, Sophie
Cc : Korchoski, Connie; Ferris, Laura; Parrill, Erika; Kristmanson, James
Objet : RE: Submission for Publication - SRR - Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project

There will definitely be outside interest. I will flag MLs with local Comms. on Monday.

De : Foster, Sophie
Envoyé : September-07-18 4:02 PM
À : Richards, Dale E
Cc : Korchoski, Connie; Ferris, Laura; Parrill, Erika; Kristmanson, James
Objet : RE: Submission for Publication - SRR - Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project

Thanks Dale

We (Jim) will make sure it gets flagged next week for posting on September 27.
https://www.mae.gov.nl.ca/env_assessment/projects/Y2016/1834/index.html

I see there were a number of appeals previously, are there media lines around this issue? Will there be any outside interest that we should flag on the tab.

Thanks

Sophie Foster
Sophie.foster@dfo-mpo.gc.ca
613-991-1284

From: Richards, Dale E
Sent: September-07-18 2:22 PM
To: Foster, Sophie
Cc: Korchoski, Connie; Ferris, Laura; Parrill, Erika
Subject: RE: Submission for Publication - SRR - Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project

Hi Sophie,

I would like to suggest that this SRR be added to the Tab 10.

The Placentia Bay Atlantic Bay Salmon Aquaculture Project was released from Environment Assessment yesterday.

Dale

s.19(1)

De : Korchoski, Connie
Envoyé : September-07-18 10:34 AM
À : Ferris, Laura
Cc : Grant, Carole; Richards, Dale E; Parrill, Erika

Objet : Submission for Publication - SRR - Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project

Good morning Laura.

The Science Response titled "Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project" has been uploaded to the NSD in the submission folder /NL/ SRR Grieg PG Aquaculture and is ready for publication.

Please let me know if any further edits are required.

Thanks and have a wonderful day!!

Connie

Regards,

Connie Korchoski
Centre for Science Advice
Newfoundland and Labrador Region
Fisheries and Oceans Canada
80 East White Hills Road, PO Box 5667, St. John's, NL A1C 5X1
Phone (709) 691-5882
E-mail / Courriel: connie.korchoski@dfo-mpo.gc.ca

Visit the Canadian Science Advisory Secretariat of DFO / Visitez le Secrétariat Canadien de Consultation Scientifique du MPO

<http://www.dfo-mpo.gc.ca/csas-sccs/>

From: Guest, Kevin (NL)
Sent: September-11-18 9:00 AM
To: Duff, Jennifer L

Hello,

Please see below anticipatory media lines for approval for the environmental assessment of Grieg's proposed operation in Placentia Bay, NL. Please note these have been approved by Ray Finn, A/RDG DFO NL region.

Cheers,
Kevin

Anticipatory Media Lines
Environmental assessment of Grieg's proposed operation in Placentia Bay

Issue

In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in a court-ordered Environmental Impact Statement (EIS). As per normal provincial EA process, DFO provided advice to the EA Committee. On September 6, 2018 the provincial Minister found the Environmental Impact Statement to be acceptable and the Provincial Cabinet released the project from further EA.

Recommendation

These media lines are anticipatory if inquiries are received related to DFO's role in the Environmental Impact Statement process. Aquaculture is a provincial lead in NL; therefore, media will be referred to the Province for questions outside of DFO's area of responsibility.

Media lines (Responsive)

- DFO often participates in provincial Environment Assessments (EAs), where it provides input relevant to its mandate.
- For the Grieg NL project in Placentia Bay, DFO-NL carried out a comprehensive review of the EIS, including a formal peer-review by Science personnel, and provided related advice to the Provincial EA Committee.
- Issues identified by DFO during the EIS review will be addressed by the Provincial conditions of release and by the Environmental Protection Plan and Environmental Effects Monitoring Program that will be required for the project.
- The aquaculture industry in NL is governed by a mature and robust provincial and federal regulatory regime, under which aquaculture projects must implement many mitigation and protection measures.
- Grieg NL will still need to obtain licences for aquaculture sites and introductions and transfers, both of which will require review and approval by DFO and provincial departments.
- The decision to release this project from provincial environmental assessment lies exclusively with the Province of Newfoundland and Labrador. The provincial Department of Municipal Affairs and Environment can provide information on that decision and their role.
- DFO officials will continue to work with the Province of NL to develop the follow up and monitoring requirements of the release of this project.

Kevin Guest
Communications Advisor (Fisheries Management)
Fisheries and Oceans Canada/Government of Canada
Kevin.Guest2@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

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No information has been removed or severed from this page

Hendry, Christopher

From: Hendry, Christopher
Sent: September-11-18 3:23 PM
To: Laking, Erin
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project
Attachments: 1834_min_eis_acc_lett_28Aug18.pdf; 1834_cab_eis_lett_5sept18.pdf; 1834_EAC_EIS review comments for proponent.pdf

FYI

Our main role moving forward will be I&T and site license advice. We will likely be engaged with the province as the EEMP is undertaken.

From: Hendry, Christopher
Sent: September-06-18 10:52 AM
To: Bieger, Tilman (Tilman.Bieger@dfo-mpo.gc.ca); Struthers, Alistair; LaRue, Jean-François
Cc: Johnson, Roger
Subject: FW: Placentia Bay Atlantic Salmon Aquaculture Project

Please see the attached decision letters on the Grieg EA, FYI.

Chris

Christopher Hendry, B.Sc. (Hons.), M.Sc.

Regional Aquaculture Coordinator, Ecosystems Management Branch
Fisheries and Oceans Canada, Government of Canada
chris.hendry@dfo-mpo.gc.ca / Tel: 709-772-6674

Coordonnateur régional, Aquaculture, direction de la gestion des écosystèmes
Pêches et Océans Canada, Gouvernement du Canada
chris.hendry@dfo-mpo.gc.ca / Tél.: 709-772-6674

From: Sweeney, Joanne [<mailto:joannesweeney@gov.nl.ca>]
Sent: September-06-18 10:46 AM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Hendry, Christopher; Grant, Carole; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Griffiths, Helen
Cc: Squires, Susan
Subject: Placentia Bay Atlantic Salmon Aquaculture Project

Please see the attached letters advising the proponent of the Minister's decision regarding the acceptability of the EIS, and the Lieutenant Governor on Council's decision regarding the acceptability of the project. Updated project information will be available this afternoon on the Department of Municipal Affairs and Environment web page at the following link:

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Public notice of the decisions will be posted on the Government of Newfoundland and Labrador "News Releases" web page this afternoon, at the following link: <http://www.releases.gov.nl.ca/>.

I anticipate the proponent will request a meeting in the near future to discuss the requirements of the EEMP and EPP. I will contact the appropriate EAC members to arrange a meeting date.

I thank you for your participation on the environmental assessment committee and for your dedication to this file. If you have any questions or concerns please feel free to call me at 729-2822.

Best regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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**Pages 2866 to / à 2990
are duplicates of
sont des duplicatas des
pages 2529 to / à 2653**

Hendry, Christopher

From: Hendry, Christopher
Sent: September-13-18 11:47 AM
To: Johnson, Roger (Roger.Johnson@dfo-mpo.gc.ca); Mallay, James G; Bieger, Tilman (Tilman.Bieger@dfo-mpo.gc.ca)
Subject: as expected

ASF plans to appeal again

<http://vocm.com/news/atlantic-salmon-federation-continues-fight-against-grieg-project/>

Christopher Hendry, B.Sc. (Hons.), M.Sc.

Regional Aquaculture Coordinator, Ecosystems Management Branch
Fisheries and Oceans Canada, Government of Canada
chris.hendry@dfo-mpo.gc.ca / Tel: 709-772-6674

Coordonnateur régional, Aquaculture, direction de la gestion des écosystèmes
Pêches et Océans Canada, Gouvernement du Canada
chris.hendry@dfo-mpo.gc.ca / Tél.: 709-772-6674

Richards, Dale E

From: Duff, Jennifer L
Sent: September-13-18 11:59 AM
To: Parrill, Erika
Cc: Richards, Dale E
Subject: RE: FOR REVIEW: Media Lines: Science assessment of environmental impact statement for the proposed Grieg operation in Placentia Bay

Hello,

I have made your change below.

Thanks,

Jen

Issue

In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in Grieg NL being required to prepare a court-ordered Environmental Impact Statement (EIS). DFO participated on an EA Committee comprised of provincial and other federal government representatives that was set up to provide advice on the EIS. On September 6, 2018 the provincial Minister announced that the Environmental Impact Statement was acceptable and the project was released from further EA.

Recommendation

These media lines are anticipatory if inquiries are received related to DFO's role in the Environmental Impact Statement process. Aquaculture is a provincial lead in NL; therefore, media will be referred to the Province for questions outside of DFO's area of responsibility. **If media inquiries related to science are received the written science lines below will be provided.**

Media lines (Responsive)

- DFO often participates in provincial Environment Assessments (EAs), where it provides input relevant to its mandate.
- **In this instance, DFO participated on an EA Committee comprised of provincial and other federal government representatives that was set up to provide advice on the EIS.**
- **DFO Science also held a formal CSAS peer-review process in the form of a Regional Science Response Process (SRP). Advice from this process will be published on the DFO CSAS website early this fall.**
- For the Grieg NL project in Placentia Bay, DFO-NL provided advice in the development of the EIS Guidelines and carried out a comprehensive review of the EIS, ~~including, and provided related advice to the Provincial EA Committee.~~
- Issues identified by DFO during the EIS review will be addressed through ~~by the~~ Provincial conditions of release, including an ~~and by the~~ Environmental Protection Plan (EPP) and Environmental Effects Monitoring Program (EEMP) ~~that will be required for the project.~~
- The aquaculture industry in NL is governed by a mature and robust provincial and federal regulatory regime, under which aquaculture projects must implement appropriate ~~many~~ mitigation and protection measures.

- Grieg NL will still need to obtain licences and permits for aquaculture sites and introductions and transfers, both of which will require review and approval by DFO and provincial departments.
- The decision to release this project from provincial EA environmental assessment lies exclusively with the Province of Newfoundland and Labrador. The provincial Department of Municipal Affairs and Environment can provide information on that decision and their role.
- DFO officials will continue to work with the Province of NL during the development of any the follow up and monitoring requirements of the release of this project.

Science:

- DFO Science reviewed the EIS and evaluated the risks associated with the proposed Grieg operation in Placentia Bay at the request of the Fisheries Protection Program, Ecosystems Management Branch.
- DFO Science assessed the report for its sufficiency of baseline data and appropriateness of methodologies to predict effects; mitigation measures; certainty in the conclusions; scientific merit of the information presented and the validity of methodologies and conclusions; proposed follow-up program; and whether additional information required to complete the technical review.
- DFO Science advises that the EIS documents are extensive and cover the appropriate topics; however, DFO has concerns with the document's assessment of the level of risk of environmental impacts resulting from the project, its conclusions and mitigation measures.
- The document indicates that the proponent will use a method of triploidy induction (which makes salmon sterile) that is better than the industry standard and will reduce impacts on wild salmon populations, particularly direct genetic effects. However, we advised that additional information was required to support this claim for DFO Science to fully evaluate the level of risk.
- DFO Science also advised that repeated testing and verification of the triploid salmon should be required to limit potential risks to wild salmon populations. However, there is no certainty in the documents that an appropriate level of testing will occur prior to the release of triploid salmon to sea cages. And since the mortality of triploids is highly likely, this will increase the proportion of diploid salmon (fish that can reproduce) in the cages, which could increase the direct genetic threat to wild salmon populations.
- Mitigation measures bullet (TBC)

From: Parrill, Erika

Sent: September-13-18 11:56 AM

To: Duff, Jennifer L

Cc: Richards, Dale E

Subject: RE: FOR REVIEW: Media Lines: Science assessment of environmental impact statement for the proposed Grieg operation in Placentia Bay

Hey Jen

One quick edit to the second yellow bullet. Please replace with Science Special Response (SSR) with Regional Science Response Process (SRP). And change "which will be published on the DFO CSAS website early this fall" to "advice from the process will be published on the DFO CSAS website early this fall" or something similar. ☺

Hope this helps
Erika

><(((°>...><(((°>...><(((°>...><(((°>...><(((°>...><(((°>

Erika Parrill
Centre for Science Advice – NL Region

From: Duff, Jennifer L
Sent: Thursday, September 13, 2018 11:42 AM
To: Richards, Dale E <Dale.Richards2@dfo-mpo.gc.ca>; Parrill, Erika <Erika.Parrill@dfo-mpo.gc.ca>
Cc: Meade, James <James.Meade@dfo-mpo.gc.ca>; Grant, Carole <Carole.Grant@dfo-mpo.gc.ca>
Subject: FOR REVIEW: Media Lines: Science assessment of environmental impact statement for the proposed Grieg operation in Placentia Bay

Hello,

Carole has provided revisions/comments on the lines below. Please review this version as Carole's changes are not included in the version included in Jim's email.

I have highlighted the new science information below. I will share the updated lines with Tilman once they are approved by Barry.

Please advise if we still need a line on mitigation measures, and if so, what this should say.

Thanks again,

Jen

Anticipatory Media Lines
Environmental assessment of Grieg's proposed operation in Placentia Bay

Issue

In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in Grieg NL being required to prepare a court-ordered Environmental Impact Statement (EIS). DFO participated on an EA Committee comprised of provincial and other federal government representatives that was set up to provide advice on the EIS. On September 6, 2018 the provincial Minister announced that the Environmental Impact Statement was acceptable and the project was released from further EA.

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- **In this instance, DFO participated on an EA Committee comprised of provincial and other federal government representatives that was set up to provide advice on the EIS.**

Best available copy

- DFO Science also held a formal CSAS peer-review process in the form of a Science Special Response (SSR), which will be published on the DFO CSAS website early this fall. [PLEASE CONFIRM THIS WITH SOMEONE FROM CSAS OFFICE]
- For the Grieg NL project in Placentia Bay, DFO-NL provided advice in the development of the EIS Guidelines and carried out a comprehensive review of the EIS, including, and provided related advice to the Provincial EA Committee.
- Issues identified by DFO during the EIS review will be addressed through by the Provincial conditions of release, including an and by the Environmental Protection Plan (EPP) and Environmental Effects Monitoring Program (EEMP) that will be required for the project.
- The aquaculture industry in NL is governed by a mature and robust provincial and federal regulatory regime, under which aquaculture projects must implement appropriate many mitigation and protection measures.
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- DFO Science advises that the EIS documents are extensive and cover the appropriate topics; however, DFO has concerns with the document's assessment of the level of risk of environmental impacts resulting from the project, its conclusions and mitigation measures.
- The document indicates that the proponent will use a method of triploidy induction (which makes salmon sterile) that is better than the industry standard and will reduce impacts on wild salmon populations, particularly direct genetic effects. However, we advised that additional information was required to support this claim for DFO Science to fully evaluate the level of risk.
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- Mitigation measures bullet (TBC)

Best available copy

Jen Rosa-Bian (Duff)
 Communications Advisor (Science)
 Fisheries and Oceans Canada/Government of Canada
jennifer.duff@dfo-mpo.gc.ca/Tel: 709-772-7633
 Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

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Hendry, Christopher

From: Hendry, Christopher
Sent: September-14-18 8:41 AM
To: [REDACTED]
Subject: RE: Invitation to an Event

[REDACTED] Thanks for the invitation. Regrettably, I won't be able to attend today. [REDACTED]

Chris

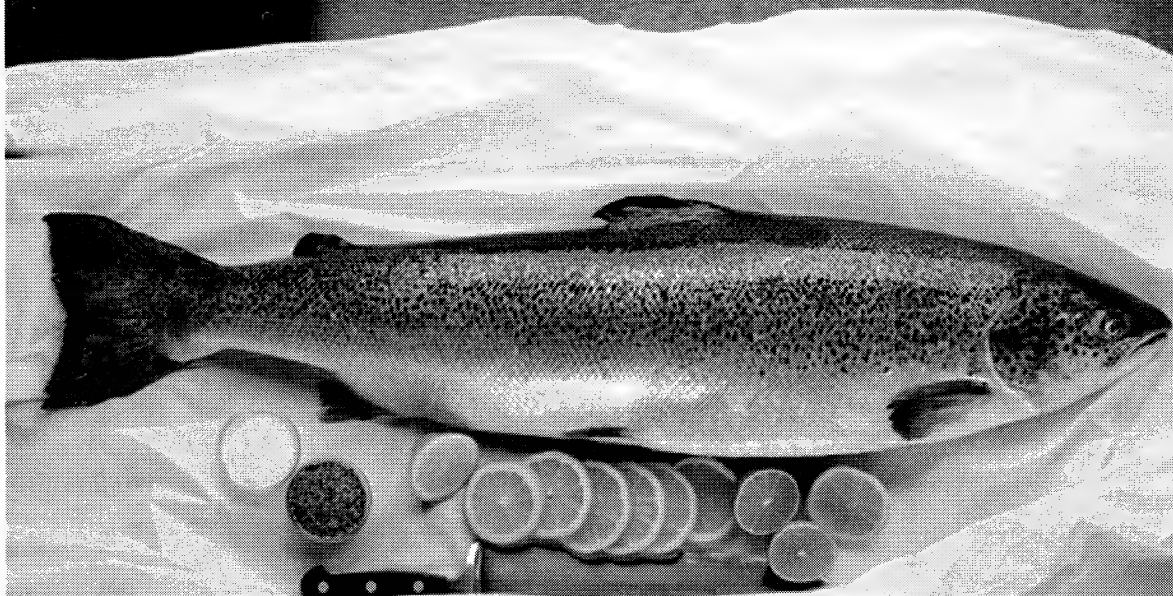
From: [REDACTED]
Sent: September-13-18 9:26 AM
To: Perry, Geoff; Jackie.Perry@dfo-mpo.gc.ca; Johnson, Roger; Hendry, Christopher; Mallay, James G
Subject: Invitation to an Event

Good Morning;
The ownership, staff and management of Grieg NL would be honored if you can attend the following event.

s.19(1)

The Way Forward

on Aquaculture



INVITATION

You are invited to a celebration marking the start of operations for Grieg NL in Newfoundland and Labrador.

Please join the Honourable Dwight Ball, Premier of Newfoundland and Labrador; [REDACTED] Grieg NL; the Honourable Gerry Byrne, Minister of Fisheries and Land Resources; Churence Rogers, Member of Parliament for Bonavista-Burin-Trinity; Mark Browne, Parliamentary Secretary to the Minister of Tourism, Culture, Industry and Innovation and MHA for Placentia West-Bellevue; Carol Anne Haley, Parliamentary Secretary to the Minister of Health and Community Services and MHA for Burin-Grand Bank; [REDACTED] of Ocean Choice International; [REDACTED] for Ocean Choice International; Sam Synard, Mayor of Marystown; and Paul Pike, Mayor of St. Lawrence, as they celebrate this occasion.

s.19(1)

Friday, September 14, 2018
12:00 p.m.

Marystown Hotel and Convention Centre
180-190 Ville Marie Drive, Marystown, NL

Regards



Grieg NL
P.O. Box 457
205 McGettigan Blvd.
Marystown, NL A0E 2M0

Tel: (709) 279-3440

Cell: 



GRIEG NL

www.griegnl.ca

s.19(1)

Pike, Kelly J

From: Ruddock, Stella D
Sent: Friday, September 14, 2018 10:08 AM
To: Finn, Ray; Bieger, Tilman; Johnson, Roger
Cc: Pike, Kelly J; Hendry, Christopher; Dunderdale, Sara; Duff, Jennifer L
Subject: MM: Aquaculture: Grieg

Good morning,

FYI, see below for some of the media coverage from the past 24 hours and an update on our media lines:

Event in Marystown today:

VOCM: [Premier, Officials To Attend Grieg Celebration In Marystown](#)

ASF appealing decision:

NTV: [Atlantic Salmon Federation appeals minister's decision on Grieg aquaculture](#)

The Telegram: [Atlantic Salmon Federation to appeal greenlight for Placentia Bay aquaculture project](#)

VOCM: [Atlantic Salmon Federation Continues Fight Against Grieg Project](#)

CBC: [Wild salmon advocates challenging latest green light for Greig NL's aquaculture plan](#)

Update on media lines: we sent regionally-approved EM lines to NHQ last week. At their request, we added a couple of science lines, which are currently going through regional approvals. We'll share those with you after they've been reviewed by Science Branch, prior to sending back to NHQ.

Thanks,
Stella

Stella Ruddock
Communications Advisor (Ecosystems Management)
Newfoundland and Labrador Region
Fisheries and Oceans Canada/Government of Canada
Stella.Ruddock@dfo-mpo.gc.ca/ Tel: 709-772-7630
Media Inquiries: Media.NL@dfo-mpo.gc.ca/ Tel: 709-772-3375

Follow us on Twitter! @DFO_NL

Korchoski, Connie

From: Korchoski, Connie
Sent: 2018–September-14 2:05 PM
To: Richards, Dale E
Subject: RE: Grieg

Done

From: Richards, Dale E
Sent: 2018–September-14 11:34 AM
To: Korchoski, Connie
Subject: Grieg

Morning Connie,

Would you be able to print a copy of the June 2018 Grieg SAR from our Share drive and give to Carole Grant in Salmonids. It will not be online until end of September.

Thanks,
Dale

E. Dale Richards, B.Sc. Hons., M.Sc.

Centre for Science Advice / Centre des avis scientifiques

Newfoundland and Labrador Region / La Région de Terre-Neuve et du Labrador

Fisheries and Oceans Canada / Pêches et Océans Canada

80 East White Hills Road, PO Box 5667, St. John's, NL A1C 5X1

Tel: (709) 772-8892 Office Phone; [REDACTED] Cellular

Fax/ Télécopieur: (709) 772-6100

E-mail / Courriel: Dale.E.Richards@dfo-mpo.gc.ca

Visit the Canadian Science Advisory Secretariat of DFO / Visitez le Secrétariat Canadien de Consultation Scientifique du MPO

<http://www.dfo-mpo.gc.ca/csas-sccs/>

s.16(2)(c)

Johnson, Roger

From: Johnson, Roger
Sent: Tuesday, September 18, 2018 9:26 AM
To: Bieger, Tilman
Subject: RE: EPP Hatchery Meeting - Friday, Sept 21, 2018?

Have called province and expressed my absolute willingness to be part of the process and that I would return early if necessary but they are going to see if meeting can be put off until Monday.

I will explore all options and keep in contact with province and keep you apprised

From: Bieger, Tilman
Sent: Tuesday, September 18, 2018 9:13 AM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: RE: EPP Hatchery Meeting - Friday, Sept 21, 2018?

Thanks for the options

I recommend you continue to attend if poss

Suggest you express preference to move to next week – but indicate you could make Friday happen if it must be that day

I am ok with OT for you to make Friday work. Is it an option for you to leave the meeting early Thursday to get a better connection? Chris is still there to represent region. I realize it eats into benefit you would get out of the travel up there etc.

As a second option I would explore Bret

We can discuss if necess

From: Johnson, Roger
Sent: September-18-18 7:59 AM
To: Bieger, Tilman
Subject: FW: EPP Hatchery Meeting - Friday, Sept 21, 2018?

I am supposed to be in the air at these times returning from Ottawa at 1513 hrs

Options:

- 1) Decline – ask meeting be postponed until next week
- 2) I will try to get a flight back the night before – I believe there is one at 1900 arriving here 0100 hrs, not sure of availability. This will require extra cost ([REDACTED])
- 3) I have spoke to Bret earlier this AM (on a mining issue) and he is back Thursday Night (late) and would be able to go to meeting in my place – this off course would have to be squared with Jason etc.
- 4) Forward this to Carol and ask her to go

Thoughts/preferences??

s.19(1)

s.21(1)(b)

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>

Sent: Monday, September 17, 2018 4:22 PM

To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelelan@gov.nl.ca>; Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA) <Jerry.Pulchan@EC.GC.CA>; Denning, Allison (HC/SC) (allison.denning@canada.ca) <allison.denning@canada.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>

Cc: Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Squires, Susan <SusanSquires@gov.nl.ca>

Subject: EPP Hatchery Meeting - Friday, Sept 21, 2018?

The proponent has requested to meet with the EA Committee on Friday, September 21, 2018, to discuss information to be included in the hatchery EPP for construction and operations. Please reply to this email by 4:00pm tomorrow, September 18, 2018 to indicate **whether** you are available to meet here **at the Confederation Building or via Skype, either Friday morning from 10:00am - 12:30pm, or Friday afternoon from 1:30 – 4:00pm.**

	Friday 10am-12:30pm	Friday 1:30-4:00pm
Skype		
Confederation Bldg		

Regards,

Joanne

Joanne Sweeney

Project EAC Chair

Environmental Assessment Division

Tel. (709) 729-2822

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Richards, Dale E

From: Foster, Sophie
Sent: September-19-18 1:37 PM
To: Richards, Dale E
Subject: tab 11 input

2	Review of the Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project (CSAS Science Response Report)	27/09/2018*	This report summarizes the findings of a review of the adequacy of the Environmental Impact Statement provided by the proponent of this project. While the information was extensive and the topics appropriate, there were significant uncertainties that were not reflected in the conclusions about risk. Additional data and use of more recent studies are needed to address identified gaps and uncertainty surrounding impacts and mitigation strategies to protect wild Atlantic Salmon.	Newfound-land and Labrador	<ul style="list-style-type: none">• No extern
---	--	-------------	--	-----------------------------------	---

Sophie Foster, PhD
Canadian Science Advisory Secretariat | Secrétariat canadien de consultation scientifique
Fisheries and Oceans Canada | Pêches et Océans Canada
200 Kent St. Ottawa, ON K1A 0E6 | 200, rue Kent Ottawa, ON K1A 0E6
Government of Canada | Gouvernement du Canada
(613) 991-1284 sophie.foster@dfo-mpo.gc.ca

Richards, Dale E

From: Duff, Jennifer L
Sent: September-19-18 3:54 PM
To: Richards, Dale E
Subject: Media Lines - Grieg EIS
Attachments: ML_Aqua_Grieg EA_E.DOCX

Hello,

The lines that are with Ottawa for approval are attached for your information. I haven't heard back from headquarters about their questions about the lines.

I've left them a message requesting more information, when I hear back I will let you know.

Thanks again,

Jen

Jen Rosa-Bian (Duff)
Communications Advisor (Science)
Fisheries and Oceans Canada/Government of Canada
jennifer.duff@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

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MEDIA LINES (Anticipatory)

Aquaculture: Grieg Assessment

Issue: In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in Grieg NL being required to prepare a court-ordered Environmental Impact Statement (EIS). DFO participated on an EA Committee, comprised of provincial and other federal government representatives, that was set up to provide advice on the EIS. On September 6, 2018 the provincial Minister announced that the Environmental Impact Statement was acceptable and the project was released from further EA.

Media lines (*Responsive*):

- DFO often participates in provincial Environment Assessments (EAs), where it provides input relevant to its mandate.
- In this instance, DFO participated on an EA Committee comprised of provincial and other federal government representatives that was set up to provide advice on the EIS.
- DFO Science also held a formal CSAS peer-review process in the form of a Science Special Response (SSR), which will be published on the DFO CSAS website early this fall.
- For the Grieg NL project in Placentia Bay, DFO-NL provided advice in the development of the EIS Guidelines and carried out a comprehensive review of the EIS.
- Issues identified by DFO during the EIS review will be addressed through Provincial conditions of release, including an Environmental Protection Plan (EPP) and Environmental Effects Monitoring Program (EEMP) required for the project.
- The aquaculture industry in NL is governed by a mature and robust provincial and federal regulatory regime, under which aquaculture projects must implement appropriate mitigation and protection measures.
- Grieg NL will still need to obtain licences and permits for aquaculture sites and introductions and transfers, both of which will require review and approval by DFO and provincial departments.
- The decision to release this project from provincial EA lies exclusively with the Province of Newfoundland and Labrador. The provincial Department of Municipal Affairs and Environment can provide information on that decision and their role.
- DFO officials will continue to work with the Province of NL during development of any follow up and monitoring requirements.

Science:

- DFO Science reviewed the EIS and evaluated the risks associated with the proposed Grieg operation in Placentia Bay at the request of the Fisheries Protection Program, Ecosystems Management Branch.
- DFO Science assessed the report for its sufficiency of baseline data and appropriateness of methodologies to predict effects; mitigation measures; certainty in the conclusions; scientific merit of the information presented and the validity of methodologies and conclusions; proposed follow-up program; and whether additional information was required to complete the technical review.

c:\users\richardsed\appdata\local\microsoft\windows\temporary internet
files\content.outlook\7rx3xc7e\ml_aqua_grieg_ea_e.docx

Created on: 18-Sep-18
Created by: Stella Ruddock
Docket #:

Last saved by: Christine Nasrallah
Revised: 18-Sep-18 12:53 PM

- DFO Science advised that the EIS documents were extensive and covered the appropriate topics; however, the CSAS report identified that the document's assessment of the level of risk of environmental impacts resulting from the project, its conclusions and mitigation measures required further information.
- The EIS indicates that the proponent will use a method of triploidy induction (which makes salmon sterile) that is better than the industry standard and will reduce impacts on wild salmon populations, particularly interbreeding genetic effects. However, DFO Science advised that additional information was required to support this claim in order to fully evaluate the level of risk.
- DFO Science also advised that repeated testing and verification of imported salmon for sterility is required to limit potential risks to wild salmon populations. As currently described in the EIS, it is unclear whether testing is sufficient to ensure the levels of sterility proposed.
- DFO Science advised that ecological effects (predation, competition, habitat, parasite/pathogen introduction, etc.) were not adequately described in the EIS document.

Spokesperson (recommended):

Science: Carole Grant, Section Head, Salmonids, NL Region

Ecosystems Management: TBD

Communications Contact:

Science: Jennifer Duff, 772-7633

Ecosystems Management: Stella Ruddock, 772-7630

Johnson, Roger

From: Finn, Ray
Sent: Thursday, September 20, 2018 7:01 AM
To: Johnson, Roger
Subject: Re: new date for EPP hatchery meeting - Wednesday, Sept 26, 2018

Looks like the "one window" into DFO is now working and in place?

Ray

[REDACTED] (cell)
(709) 772 - 2442. (office)

s.16(2)(c)

Sent via Blackberry

From: Johnson, Roger
Sent: Wednesday, September 19, 2018 10:43 PM
To: Bieger, Tilman; Finn, Ray
Subject: Fw: new date for EPP hatchery meeting - Wednesday, Sept 26, 2018

FYI

Meant to forward yesterday

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: Tuesday, September 18, 2018 1:32 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Johnson, Roger
Cc: Squires, Susan
Subject: new date for EPP hatchery meeting - Wednesday, Sept 26, 2018

This Friday will not work for a meeting with the EAC and Grieg representatives to discuss the EPP for hatchery construction and operations. I'm proposing next **Wednesday, September 26, 2018 from 10:00am to 12:30pm**. I'll send around a calendar invite shortly. Please accept or decline the meeting asap, based on your availability. Hopefully this time slot will work for all/most.

Regards,

Joanne
729-2822

From: Sweeney, Joanne
Sent: Monday, September 17, 2018 4:22 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Pulchan, Jerry [St. John's] (Jerry.Pulchan@EC.GC.CA); Denning, Allison (HC/SC) (allison.denning@canada.ca); Johnson, Roger (Roger.Johnson@dfo-mpo.gc.ca)

Cc: Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Squires, Susan
Subject: EPP Hatchery Meeting - Friday, Sept 21, 2018?

The proponent has requested to meet with the EA Committee on Friday, September 21, 2018, to discuss information to be included in the hatchery EPP for construction and operations. Please reply to this email by 4:00pm tomorrow, September 18, 2018 to indicate **whether** you are available to meet here **at the Confederation Building or via Skype, either Friday morning from 10:00am - 12:30pm, or Friday afternoon from 1:30 – 4:00pm.**

	Friday 10am-12:30pm	Friday 1:30-4:00pm
Skype		
Confederation Bldg		

Regards,

Joanne

Joanne Sweeney
Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

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Johnson, Roger

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: Thursday, September 20, 2018 2:45 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Denning, Allison (HC/SC) (allison.denning@canada.ca); Johnson, Roger; Hingston, Michael (EC) (michael.hingston@canada.ca); Squires, Susan
Subject: draft EPP for review
Attachments: FA0159-GriegNL-EPP-RAS Hatchery Operations.pdf; FA0159-GriegNL-EPP-RAS Hatchery Construction.pdf

Hi All,

I've attached the EPP docs for the hatchery construction and operations for your review. This should make for a more productive meeting with the proponent on Wednesday (10 – 12:30) next week.

Joanne
709.729.2822

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2018

**PLACENTIA BAY ATLANTIC SALMON AQUACULTURE PROJECT
ENVIRONMENTAL PROTECTION PLAN (EPP):
RAS HATCHERY OPERATIONS**



GRIEG NL

9/19/2018

003010

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Preface

Grieg NL's Environmental Protection Plan (EPP) for the Placentia Bay Atlantic Salmon Aquaculture Project is a directive document that provides detailed steps to avoid or minimize negative effects on the environment. The EPP covers operation of the Recirculating Aquaculture System (RAS) Hatchery located in Marystown, Newfoundland and Labrador (NL). The responsibilities and procedures presented in this document are designed to ensure the efficacy of the plan and to allow for ongoing updates to the plan to accommodate improvements. This Preface includes overviews of the following:

- Distribution List
- EPP Responsibilities
- EPP Revision Procedures

Distribution List

The EPP will be provided to relevant Grieg NL personnel, contractors, subcontractors, and government agencies designated as having a surveillance responsibility.

Grieg NL Personnel

- General Manager
- Production Manager
- Environment, Health and Safety Advisor
- Owner Representative
- Grieg NL Site Manager(s) (Land and Sea) where appropriate

Contractors

- General Manager
- Environment, Health and Safety Manager

Subcontractors

- General Manager
- Environment, Health and Safety Manager

Government Agencies

- Department of Municipal Affairs and Environment (DMAE)
- Department of Fisheries and Land Resources (DFLR)
- Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada (ECCC)
- Transport Canada

EPP Responsibilities

The responsibilities of Grieg NL and its employees as well as those of contractors and subcontractors are summarized below.

As the proponent, Grieg NL shall:

- Provide approval for the final issued version of the EPP and subsequent revisions.
- Inspect and monitor project activities during operation of the RAS Hatchery.
- Conduct EPP reviews on a regular and as-needed basis.
- Communicate with relevant government agencies and local stakeholders as required.

The Grieg NL Environment, Health and Safety (EHS) Advisor or their designated representative(s) shall:

- Be responsible for implementation of the EPP.
- Review and approve revision requests.
- Conduct EPP reviews on a regular and as-needed basis.
- Maintain document control.
- Ensure the EPP holders and their personnel are familiar with the EPP and its procedures.
- Strive for compliance with all permits, authorizations, and approval conditions; and ensure that appropriate supervisory personnel are on site during project activities as appropriate.

The Grieg NL Site Managers or their designated representative(s) shall:

- Distribute revisions to EPP holders.
- Be familiar with all aspects of the EPP.
- Confirm that all activities are conducted in accordance with the EPP.
- Hold an environmental awareness session for each Contractor and its personnel, and other personnel to be involved in the Project.
- Report on the efficacy of the EPP.
- Attend weekly contractor meetings.
- Identify any deficiencies in the plan and propose appropriate changes.
- Direct appropriate contingency actions and enact external notifications procedures in the event of an incident.
- In his or her absence, designate a qualified replacement.
- Manage the environmental inspection and monitoring needed to meet EPP requirements and reporting requirements of Grieg NL.

EPP holders shall:

- Keep EPP copy current and enter all revisions on the revision control record.
- Familiarize themselves and their personnel with the EPP and any revisions.
- Initiate changes to improve the EPP.

Contractors, Subcontractors and Site Personnel shall:

- Become familiar with the EPP.
- Become knowledgeable of reporting procedures.
- Comply with the EPP, contract requirements, and applicable laws/regulations.
- Obtain applicable permits, approvals and authorizations in coordination with Grieg NL personnel.
- Attend all required EHS training and orientation programs.
- Report all incidents of non-compliance with the EPP.

EPP Revision Procedures

The EPP is a controlled document and revisions may only be made with the approval of Grieg NL. EPP users are encouraged to submit suggestions for changes and improvements to the EPP, using the *EPP Revision Request Initiation Form* (see below). Upon receipt of suggestions, and where appropriate, designated Grieg NL personnel will prepare a proposed revision to be submitted for approval by Grieg NL's EHS Advisor or another designated representative. Approved revisions will be issued to all members of the EPP Distribution List (see above), accompanied by a Revision Control Record (see below), which will provide the EPP section(s) being superseded and revision instructions. Each revision will also be accompanied by an updated EPP Table of Contents.

Within two working days of receiving an approved EPP revision, EPP users are to:

- Confirm all listed pages have been received in accordance with the Revision Control Record;
- Read the revised text;
- Insert the revised pages into the appropriate position within the EPP, and remove and destroy the superseded pages;
- Confirm the EPP document is in accordance with the updated Table of Contents;
- Enter the revision number and date on the Revision Control Record, and sign; and
- Incorporate the revision into Project activities, and ensure all personnel are familiar with the revision.

Grieg NL Placentia Bay Atlantic Salmon Aquaculture Project Environmental Protection Plan (EPP)

Revision Request Initiation Form

Name:

Affiliation (Position and Company / Government Department):

Date (D-M-Y):

EPP Section to be Revised:

Nature of Revision (e.g., sewage disposal, noise control, etc.):

Rationale for Revision (e.g., environmental or worker safety, etc.):

Suggested Revision:

Please submit to TBD, EHS Advisor, Grieg NL at the following address:
205 McGettigan Blvd., Marystown, NL A0E 2M0

Revision Control Record for the EPP

Revision Number	Date (D-M-Y)	Revised EPP Section(s)	Revision Instructions and Source	EPP Holder's Signature

List of Acronyms

AAR	Aquaculture Activities Regulations
BMA	Bay Management Area
BPWMC	Burin Peninsula Waste Management Corporation
CEPA	<i>Canadian Environmental Protection Act</i>
CFIA	Canadian Food Inspection Agency
CWS	Canadian Wildlife Service
DFLR	Department of Fisheries and Land Resources
DFO	Fisheries and Oceans Canada
DMAE	Department of Municipal Affairs and Environment
DNS	Denitrification System
DSTI	Daily Safe Task Instruction
ECCC	Environment and Climate Change Canada
EHS	Environment, Health and Safety
EIS	Environmental Impact Statement
EPP	Environmental Protection Plan
FCR	Feed Conversion Ratio
GAP	Gasoline and Associated Products
ID	Identification
MARPOL	Marine Pollution (International Convention for the Prevention of Pollution from Ships)
MSDS	Material Safety Data Sheets
NL	Newfoundland and Labrador
OCI	Ocean Choice International
PPE	Personal Protection Equipment
RAS	Recirculating Aquaculture System
RO	Response Organization
SARA	<i>Species at Risk Act</i>
SOP	Standard Operating Procedures
WHMIS	Workplace Hazardous Materials Information System

1.0 Introduction

This Environmental Protection Plan (EPP) has been developed by Grieg NL to describe environmental protection procedures for activities associated with the operation of the land-based hatchery, which is a key component of the Placentia Bay Atlantic Salmon Aquaculture Project. The hatchery facility, referred to as the Recirculating Aquaculture System (RAS) Hatchery, is located in the Marystown Marine Industrial Park adjacent to Mortier Bay. The EPP has been developed in compliance with a condition of the Project release issued by the provincial Department of Municipal Affairs and Environment (DMAE) at the conclusion of an environmental assessment process. The EPP will serve as a set of instructions for Project-related activities and will detail the various environmental permits and authorizations to be issued by different agencies. Separate EPP documents will be prepared for the construction and operation of the sea cage sites in Placentia Bay.

This Grieg NL EPP is considered a living document and will be reviewed and updated on a regular and as-needed basis throughout the various stages of the Project life. Consequently, this is a controlled-distribution document, intended to be maintained in an updated condition by each listed/approved recipient (see Preface for details).

1.1 Purpose of the EPP

The EPP is an important component of overall Project planning and implementation of Project activities. It is considered part of Grieg NL's overall Environment, Health and Safety management system (see Section 3).

The EPP is a stand-alone document describing the responsible Project staff and environmental protection procedures for activities associated with the operation of the RAS Hatchery. Environmental protection procedures for the decommissioning and rehabilitation phase of the Project will be developed at a later date. A construction EPP for the RAS Hatchery has been prepared. In addition, the EPP clearly outlines responsible company personnel include front-line workers, occupational health and safety and environmental staff.

This EPP will be used to ascertain that Grieg NL's environmental-related commitments are implemented, adhered to, and monitored. The EPP will serve to:

- Provide a record of mitigation measure implementation.
- Provide a functional management framework to ensure regulatory compliance and to identify opportunities for continuous improvement in environmental performance.
- Identify and document compliance with applicable legislation, permits and authorizations associated with each Project phase and ensure adequate communication with government environmental surveillance staff.

1.2 Organization of the EPP

The EPP is organized as outlined below and is designed to address DMAE requirements and to facilitate ease of use:

Preface – Identifies the distribution list for the EPP and provides document revision and control procedures.

Section 1: Introduction – Lays out the organization of the EPP and overviews the purpose of the document.

Section 2: Overview of the Project – Highlights the key components, location, activities, and timeline for the Project to provide context for the EPP user.

Section 3: Environment, Health and Safety System – Overviews Grieg NL's Environment, Health and Safety (EHS) system, the relationship of the EPP to the Grieg NL Policy on sustainability; the organization, development and implementation of the EPP; and employee environmental orientation.

Section 4: Environmental Protection Procedures – Details environmental protection procedures to be employed during routine operation activities. This section also includes a summary of key environmental concerns associated with Project activities.

Section 5: Contingency Plans – Provides contingency plans for potential unplanned and accidental events such as spills of fuel or other hazardous material and wildlife encounters.

Section 6: Legislation, Permits and Authorizations – Outlines the legislation, required permits, approvals and authorizations for the operation of the RAS Hatchery.

Section 7: Contact List – Provides emergency, advisory and other contact numbers for corporate personnel, contractors, external resources and regulators.

Section 8: Resource Material – Identifies guidelines and resource material relevant to environmental protection measures, mitigation and monitoring.

2.0 Project Description

The Placentia Bay Atlantic Salmon Aquaculture Project has two primary components: (1) a land-based Recirculating Aquaculture System (RAS) Hatchery located in the Marystown Marine Industrial Park and (2) sea cage sites located in the northern portion of Placentia Bay that will be used to grow the salmon to market size (Figure 2.1). The development of the Project, including construction and operation of the RAS Hatchery and sea farms, will undergo a phased approach before reaching peak production of seven million salmon per year. It is anticipated that the RAS Hatchery will be operational in Year 2 and reach full production capacity in Year 6. The first harvest at peak production at the sea farms is anticipated to occur in Year 8.

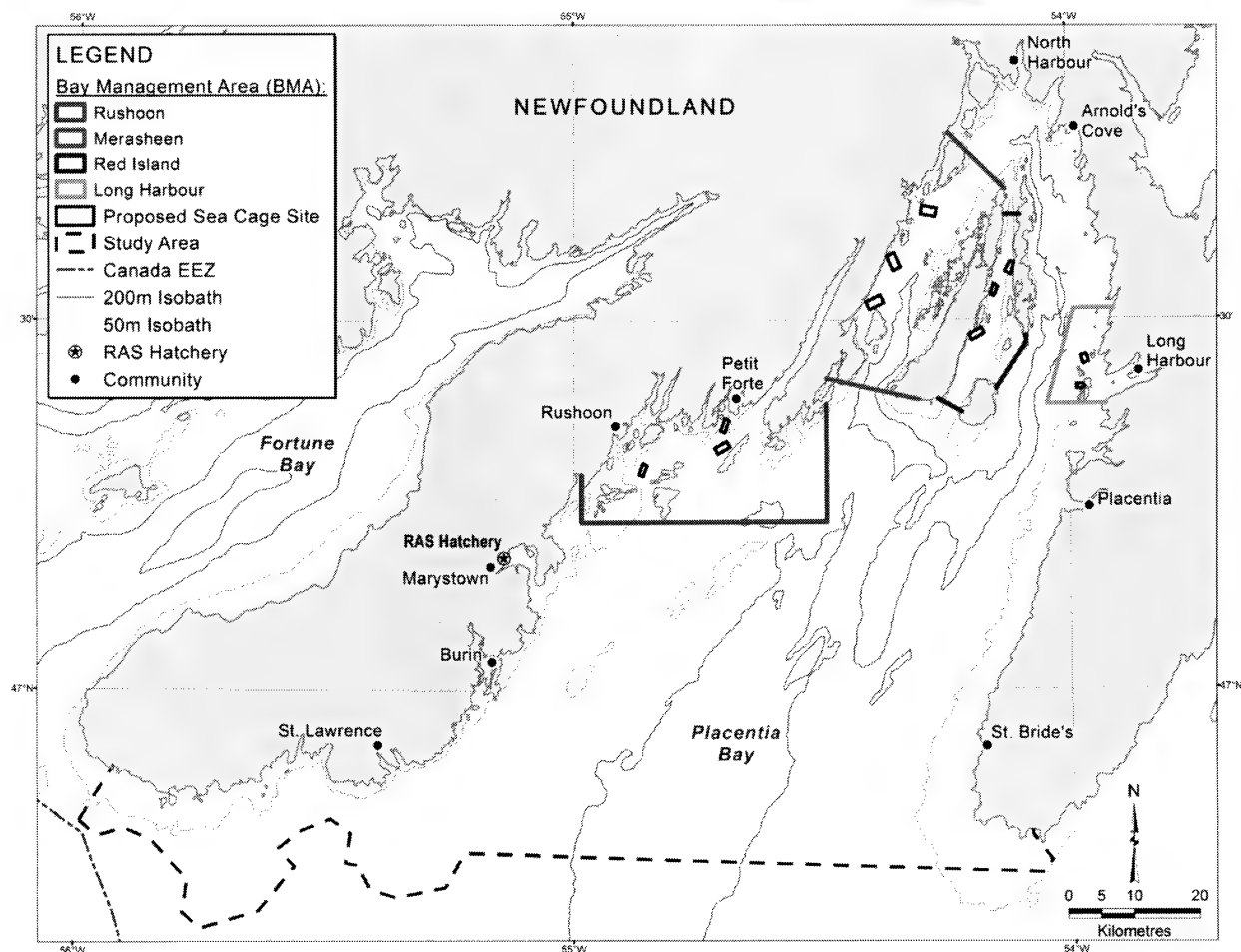


Figure 2.1. The locations of the RAS Hatchery, sea cage sites, and Bay Management Areas for Grieg NL's Placentia Bay Atlantic Salmon Aquaculture Project. [Also shown is the Study Area used in the Environmental Impact Statement].

At the RAS Hatchery, smolt will be grown to sizes ranging from 350–1,400 g and then will be transferred to a well boat and delivered directly to sea cage sites. Eleven sea cage sites will be located within four Bay Management Areas (BMAs), which have been established for biosecurity purposes. Three of the

BMA's are planned for semi-annual production and one BMA is planned for seasonal production. The semi-annual and seasonal sea cage sites will each have a maximum of 12 and 6 sea cages, respectively. Each of these sea cages can hold 160,000 salmon. At peak production, there will be seven active sea cage sites with 78 sea cages in operation per year. Each year, the sea cage sites in one BMA will be fallowed before the sea cages will be restocked with salmon.

Each sea cage site will be attended by several vessels including a feed/accommodation barge, satellite feed barge, service vessel, crew vessel, and a work boat. Once salmon have reached market size (~5 kg) they will be transferred to a dead hold vessel and then onto a third-party for processing.

Personnel working at the sea cage sites will be transported via dedicated crew vessels. Grieg NL anticipates one-week shifts at sea where personnel will live aboard the feed/accommodation barge. The crew change sites will have specific areas for embarkation to and disembarkation from the proposed sea cage sites, which is designed to avoid cross-contamination. Crew changes for the proposed sea cage sites in the Rushoon, Merasheen and Red Island BMA's will be conducted in Petit Fort and in Long Harbour for the Long Harbour BMA.

Services and supplies for all BMA's will be provided using wharf facilities at two former Ocean Choice International (OCI) premises, one each in Marystown and Burin. One of the resupply sites will be designated "inflow" and the other "outflow" to prevent cross-contamination of clean/new equipment going to the sea cage sites and used equipment returning for cleaning and servicing. Additionally, the resupply site designated as outflow will receive waste from the sea cage sites.

2.1 RAS Hatchery

The RAS Hatchery consists of three primary biosecure facilities (i.e., First-Feeding, Smoltification, and Post-Smolt) that have a total area of 30,000 m² (Figure 2.2). The site for the RAS Hatchery in the Marystown Marine Industrial Park was cleared in 2016 and 2017. However, blasting and some grubbing remains to be done before construction on the buildings can commence. The lots in the Marystown Marine Industrial Park are already serviced with three-phase power, municipal water and sewer, and a paved access road. The RAS that will be used at the hatchery is considered state-of-the-art and operates by filtering water from the fish tanks, so it can be reused. The system uses 300 L of water per minute versus the 500,000 L of water per minute, which is typical in a flow-through system that is not reusing any water to accomplish an equivalent production of smolt.

2.2 Sea Cage Sites

The proposed sea cage sites (see Figure 2.1) have areas ranging from 0.8 km² to 3.2 km² and occur in water depths ranging from ~10 m to 308 m. Sites have been selected based on suitable water currents and depths, bottom type, shelter from wind and waves, and input from local users and regulatory agencies. Semi-annual and seasonal sea cage sites will have 12 or 6 sea cages, respectively; sea cages will be arranged in a line with a feed barge located between the cages. The sea cages and associated mooring system used to house fish will be state-of-the-art, heavy duty Aqualine Midgard Systems. Each sea cage is 50 m in diameter, extends 45 m below the surface, and will consist of a cage net, floating collar, gangway, sinker ring (tube), winches, and fish mortality removal system.

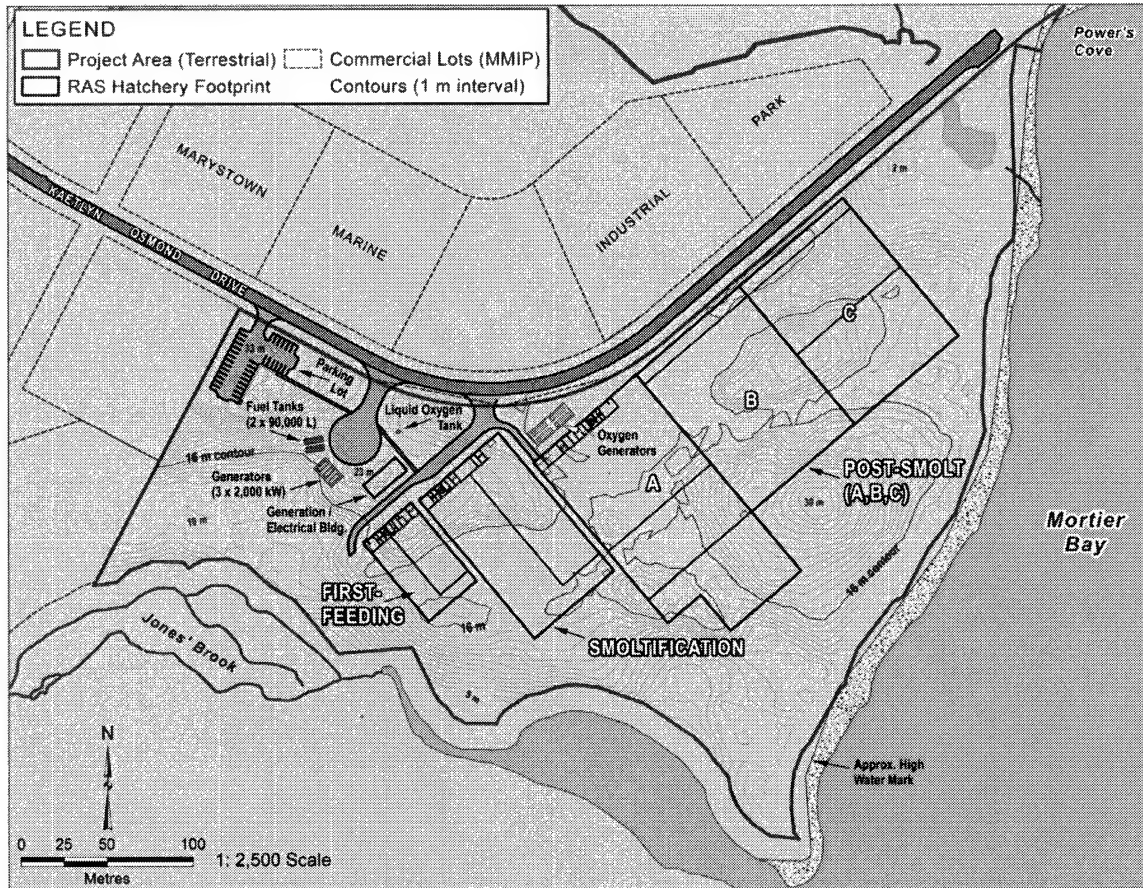


Figure 2.2. Schematic of RAS Hatchery in the Marystown Marine Industrial Park.

2.3 Best Available Technology

Grieg NL will use the best available technology at the RAS Hatchery and sea cage sites, along with a number of mitigation measures that go beyond the common aquaculture industry standard. These measures include such approaches as the utilization of sterile triploid all-female Atlantic salmon to minimize potential effects on wild salmon, the use of lumpfish (*Cyclopterus lumpus*) to control sea lice, and following protocols that exceed government requirements.

3.0 Environment, Health and Safety Management System

Grieg NL recognizes environmental protection as one of their guiding principles and a key component of sound business performance. Grieg NL is committed to providing a quality service in a manner that ensures a safe and healthy workplace for its employees and minimizes potential negative effects on the surrounding environment. Grieg NL will operate in compliance with all federal, provincial and municipal environmental legislation, and strive to use pollution prevention and environmental best practices whenever possible.

Grieg NL's EHS system will:

- Integrate the consideration of environmental concerns and interactions into all decision making and activities.
- Promote environmental awareness among its employees and require them to work in an environmentally responsible manner.
- Train, educate and inform its employees about environmental issues that may affect their work.
- Promote sustainability through the practice of reuse, recycle, refurbish and reduce waste.
- Avoid or reduce use of hazardous materials and products, seek substitutions when feasible, and take all reasonable steps to protect human health and the environment when such materials must be used, stored and disposed of.
- Operate by the highest standards possible to ensure protection of the environment while avoiding unplanned events (spills).
- Develop and maintain appropriate emergency and spill response capabilities.
- Train all employees in best practices for health and safety.
- Provide necessary Personal Protective Equipment (PPE) and instruction for its use and care.
- Develop and enforce safety and health rules, requiring that employees comply with these rules as a condition of employment.
- Investigate every accident, promptly and thoroughly, to determine its cause, and whenever possible, put measures in place to ensure against recurrence.
- Strive to continually improve environmental performance by periodically reviewing and updating EHS policy.

3.1 Roles and Responsibilities

The following section outlines the management structure, roles and responsibilities of personnel, for the implementation of Grieg NL's EHS policy for the operation phase of the RAS Hatchery.

Grieg NL General Manager: Primary person responsible for overall development of the RAS Hatchery, including environmental issues. Specific environmental responsibilities include:

- Ensuring environmental considerations are a part of the Project decision making process.
- Ensuring adequate plans and resources are in place to achieve environmental commitments to minimize environmental effects.
- Reviewing incident reports as they are submitted and ensuring the proper course of action is taken to manage unexpected environmental conditions or events.

Grieg NL Production Manager: Primary person responsible for day-to-day operation of the RAS Hatchery. Reports to the Grieg NL General Manager. Specific environmental responsibilities include:

- Ensuring adequate plans and resources are in place to achieve EPP commitments.
- Approve incident reports as they are submitted and ensuring the proper course of action is taken to manage unexpected environmental conditions or events.

Grieg NL Land-based Site Manager(s): Report to the Grieg NL Production Manager. Specific environmental responsibilities include:

- Ensuring personnel properly implement EPP procedures and reporting requirements.
- Completing and submitting incident reports to the Grieg NL Production Manager.

Grieg NL EHS Advisor: Primary Grieg NL employee responsible for overall environment, health and safety. Reports to the Grieg NL Production Manager and is responsible for:

- Providing environmental orientation to new employees.
- Providing awareness training on an as-needed basis.
- Ensuring that equipment is installed correctly/safely.
- Identifying potential environmental hazards.
- Determining ways of reducing EHS risks.
- Liaising with relevant authorities and contractors.
- Keeping up to date and ensuring compliance with current EHS legislation.

Grieg NL Water Quality Specialist: Responsible for routine monitoring of water quality and water level in the well. Reports to the Grieg NL Production Manager. Specific environmental responsibilities include:

- Routine monitoring of water quality of incoming water and water within all land-based production facilities.
- Routine monitoring of water levels in well supplying water to all land-based facilities.
- Maintaining and submitting records of all monitoring to the Grieg NL Production Manager.

Grieg NL EHS Representatives: Land-based personnel designated as employee representatives for EHS. Report to their appropriate Site Manager and are responsible for:

- Ensuring provision of orientation of new employees or awareness training is conducted as required.
- Coordinating routine EHS meetings.
- Maintaining EHS documentation of routine meetings.

3.2 Sustainability Policy

A key component of the Grieg NL EHS system is its sustainability policy, which is overviewed here and promoted throughout the EPP. Ultimately, Grieg NL's vision is to provide Placentia Bay Atlantic salmon for the world. Achieving this vision in a sustainable manner will be met through the company's commitment to the following principles: leadership, transparency, integrity, continuous improvement, inclusivity, and stewardship.

3.2.1 Priorities

Grieg NL's goal is the sustainable production of Atlantic salmon in the waters of Placentia Bay. Based on the expectations of Grieg NL and its stakeholders, the following priorities have been identified as key elements that are important for Grieg NL's achievements, profitability and survival with a focus on local and global sustainability:

- Fish health and welfare;
- Sea lice control;
- Fish escape control;
- Minimal emissions;
- Minimal interactions with wildlife; and
- Climate change.

3.2.2 Commitment and Scope

The sustainability policy will apply to all operations under Grieg NL. Grieg NL will utilize third-party service companies for many aspects of its operations and acknowledge that although Grieg NL cannot control the decisions of these parties, it commits to educate them of its policy. These third-party service providers will be encouraged to align their operating procedures with Grieg NL policy objectives. Grieg NL's priorities and any relevant decisions will be compliant with local, provincial and federal laws and regulations. Grieg NL will strive to exceed legal requirements with regard to sustainability, in order to be innovative and to demonstrate sustainability leadership.

3.2.3 Objectives

Grieg NL commits to:

- Focus on a safe and environmentally friendly food chain that produces quality products for consumers.
 - Strive to improve the feed conversion ratio (FCR) to a 1:1 ratio combined with optimization of fish products using the processing discards for human and other pharmaceutical or nutraceutical products.
- Balance profitable growth and innovation with environmental sustainability by using innovative technology and enhanced data collection to improve ecosystem understanding and sustainability decision-making.
 - Utilizing a RAS that requires minimal water consumption during smolt production.

- Target to utilize fish feed that is produced using protein not designated for human consumption.
- Balance sustainable aquaculture and productive seas to maintain fish health and welfare, while also protecting the shared natural resources of the sea.
 - Utilizing sterile triploid all-female Atlantic salmon for all production in Placentia Bay.
- Providing a work environment that will attract and retain employees with a focus on health and safety, diversity, equity and integrity in the workplace.
 - Direct employment approaching 150 people in the Province upon reaching steady-state production.
- Local value creation, not only by hiring local residents, supporting local industries and utilizing third-party service contractors, but also contributing to the local communities by volunteering and donating resources.
- Publishing an annual Sustainability Report reviewing progress on achieving its goals that will be available to stakeholders and the public.

3.3 Development and Implementation of the EPP

The EPP is an essential component of Grieg NL's EHS system and is intended to ensure that all Project personnel abide by appropriate environmental protection actions, encompassing all Project phases for the RAS Hatchery. As noted earlier, this is a living document that will be revised as necessary based on review and approval of received suggestions, and to meet the requirements of reviewers and environmental approvals. EPP documents are typically revised as needed to reflect site- and/or task-specific activities as they relate to environmental protection measures and are structured to allow for revisions as Project activities progress. A separate EPP was prepared for construction of the RAS Hatchery and in future, an EPP will be prepared for decommissioning activities.

3.3.1 General Practices and Training

Grieg NL recognizes that communication and training are key to ensuring that Project activities with the potential to create a negative environmental effect are identified, and that preventative and/or mitigation measures are implemented. All Grieg NL employees, contractors, and subcontractors will undergo employee orientation, which includes a review of environmental concerns and procedures. Additionally, multiple mechanisms are in place to ensure that the EPP contents are communicated to employees throughout the Project. A summary of these general practices is provided below.

3.3.1.1 Employee Orientation

Grieg NL recognizes the importance of EHS and is committed to ensuring a safe work environment for its employees, contractors and subcontractors, while also recognizing the importance of procedures and practices that will protect the environment. Grieg NL considers good husbandry and a strong focus on environmental protection essential during all Project phases and will emphasize this message to all new employees as part of their training and environmental orientation, and within Grieg NL's ongoing EHS management system. Grieg NL will ensure that all Project personnel, including contractors and subcontractors, are prepared and capable of completing their jobs competently and responsibly.

Grieg NL will maintain records of all environmental training and orientation sessions, including a description of the presented material, session dates and attendance. All Grieg NL personnel will receive orientation by a supervisor with awareness training. As well, on-going training will be provided on an as-needed basis. A dedicated software program (i.e., *Intelix*, business intelligence software) will be utilized to maintain these records and certifications.

All Project personnel working on site are required to participate in a site-specific Project and environmental orientation upon commencement of their employment and periodically thereafter as needed. This orientation will increase awareness of the Grieg NL EPP, including environmental protections relative to site-specific work activities, regulatory requirements, emergency preparedness and spill response capabilities, as well as client/contractor expectations for individual personnel roles and responsibilities.

Environmental orientation will include the following:

- Details on Grieg NL's EHS management system, EHS policy and obligations under the EPP.
- A presentation on environmental protection procedures to be applied to all work activities.
- Procedures for spill response and environmental emergencies.
- Personnel roles and responsibilities, including emergency preparedness.
- Description of tasks and activities, including any relevant activities that could involve environmental concerns.
- Instruction on specific procedures for environmental protection, including prevention, mitigation measures and documentation.
- The importance of enforcement and compliance with the EPP.

3.3.1.2 Operation Phase

During operation of the RAS Hatchery, Grieg NL has identified the following general mechanisms for dissemination of and conformance to the EPP:

- *Employee Orientation*: Grieg NL is committed to ensuring that its personnel are knowledgeable, trained and prepared for any tasks they may be required to perform. Employee Orientation will be mandatory for new employees. Supplemental orientation sessions will also occur on an as-needed basis, such as when revised procedures have been developed or new equipment introduced.
- *Daily Safe Task Instruction (DSTI)*: Supervisors will meet daily with their staff to discuss tasks to be performed each day. Risks and hazards will be identified as well as any measures to minimize or mitigate these. For tasks that involve high environmental or safety risks, such as fish transfers, the use of DSTI Forms may be implemented in order to identify the risks involved with these tasks, and to ensure that these risks have been clearly communicated to staff, with documentation to be provided of this communication.

- *Weekly Toolbox Meetings:* Personnel will be required to participate in a Weekly Toolbox Meeting. These meetings will provide an opportunity for staff to relay any safety or environmental concerns to their supervisors. Although informal, attendance will be recorded, topics discussed (and action commitments) will be documented. All meeting records will be maintained on file.
- *Environmental Action Meetings:* Should an environmental issue arise that requires action, and is deemed manageable within Grieg NL's responsibility, a site manager and/or the Production Manager can request an Environmental Action Meeting to discuss the issue. Upon request, staff will participate in efforts to address and resolve the specific environmental issue.

3.3.1.3 Overall Operations

- *Annual Environmental Performance Review:* In order to continually improve on its performance, Grieg NL will hold annual environmental performance review meetings. Site managers, along with the Production Manager and/or General Manager, will review environmental performance and compliance at the RAS Hatchery. These meetings will provide an opportunity to ensure EPP procedures as well as permitting and governmental policies are consistent.
- *Monthly/As-needed Toolbox Meetings:* The Production Manager will meet monthly or as required with site managers from the RAS Hatchery. These informal meetings will address, among other topics, Health, Safety, Environment and Security issues. These monthly meetings will provide an avenue to discuss any concerns or recent incidents.

4.0 Environmental Protection Procedures

Environmental protection procedures are provided here for each of the primary operation activities associated with the RAS Hatchery. As the work proceeds, these procedures may be modified or new procedures implemented, to account for new Project activities, site conditions, changes in engineering design or operational methods, and as a result of lessons learned during activities.

For Project activities at the RAS Hatchery, Grieg NL will have Standard Operating Procedures (SOPs) in place, which provide step-by-step instructions for conducting various operation activities. These SOPs will also contain steps to protect the environment and which are in line with the procedures provided below. Employees, contractors and suppliers are required to follow and adhere to all environmental protection procedures.

4.1 Storage, Transportation, Transfer, Handling and Disposal of Fuel and Other Hazardous Substances

Environmental Concern

During the operation phase, some substances will be used which are or may be classified as hazardous including petroleum, oil and lubricants; chlorinated and non-chlorinated solvents (e.g., cleaner-degreasers); waste petroleum products (e.g., used engine/motor oil); glycol (e.g., antifreeze), paints, and epoxies. The primary concern regarding the use and storage of fuel or other hazardous materials is an uncontrolled or accidental release into the environment and subsequent negative effects on terrestrial and aquatic habitat and species, soil, surface and groundwater quality and human health and safety.

Protection Plan

The following procedures will be implemented to reduce the likelihood of accidental release of hazardous substances that may result in negative environmental effects:

1. Procedures for the handling of fuels and other hazardous materials as well as contingency plans for spills will be present in hard copy at receiving, storage, transfer and disposal areas.
2. Any soil contaminated by small leaks of fuel, oil or grease from equipment shall be cleaned up and disposed of in accordance with the applicable regulations, under the provincial *Environmental Protection Act* (2006) and Used Oil Control Regulation (82/02). The Used Oil Control Regulation (82/02) will be used as a guideline to the DMAE requirements for such disposal.
3. Smoking will not be permitted on the Grieg NL facility property.
4. A complete inventory of the hazardous materials on the job site shall be maintained according to the Workplace Hazardous Materials Information System (WHMIS) Regulations and will be made available to regulatory agencies upon request or in case of any emergency.
5. All sub-contractors and Grieg NL employees shall be required to observe strict compliance with the requirements of WHMIS regarding employee training, use, handling, storage, and disposal of hazardous materials and regarding labeling and provision of Material Safety Data Sheets (MSDS), as required by WHMIS legislation.

6. Tanks shall be located in areas where spills, should they occur, shall not flow to watercourses, water bodies, ditches or the marine environment.
7. Fuel tanks shall be located on concrete pads surrounded by a containment barrier to prevent spills to the environment as described in section 27 – Construction and Installation Standards of *Storage and Handling of Gasoline and Associated Products Regulations, 2003*. Tanks for fuels and other hazardous materials shall be self-dyked or be positioned over an impervious mat, surrounded by an impervious dyke of sufficient height, more specifically:
 - a. Where a dyked area contains only one storage tank, the dyked area will retain not less than 110% of the capacity of the tank; and
 - b. Where a dyked area contains more than one storage tank, the dyked area will retain not less than 110% of the capacity of the largest tank or 100% of the capacity of the largest tank plus 10% of the aggregate capacity of all the other tanks, whichever is greater.
8. All storage facilities shall be located away from operation activities, provided with secondary containment, and inspected on a regular basis in compliance with all government laws and regulations.
9. Oils, grease, gasoline, diesel or other fuels or any material deemed to be hazardous shall be stored at least 100 m from any watercourse or the ocean.
10. Fuel and other hazardous materials storage areas and non-portable transfer lines shall be clearly marked or barricaded to protect against damage by moving vehicles. The markers will be visible under all weather conditions. Barriers shall be constructed in compliance with the provincial Storage and Handling of Gasoline and Associated Products (GAP) Regulations (58/03).
11. Hazardous materials shall be properly labelled and stored in an appropriate storage cabinet, cupboard or designated area.
12. Containers containing hazardous materials shall be appropriate for the material being stored and shall always be kept sealed when not in use.
13. The transportation, use and storage of fuel and other hazardous materials is regulated by The Storage and Handling of GAP Regulations and Amendments, *Transportation of Dangerous Goods Act* (1992) and *Dangerous Goods Transportation Act* (2006). Employees and contractors shall follow all required regulatory policies and procedures.
14. Hazardous Storage Areas shall be equipped with appropriate firefighting equipment.
15. All Occupation Health and Safety regulations regarding the use, storage and training on all classes of fire extinguishers that may be required shall be followed.
16. Waste oils, lubricants and other used oil shall be retained in a tank or closed container and shall be disposed of regularly under contract with a licensed used oil collector in accordance with the Used Oil Control Regulations (82/02).
17. Greasy or oily rags or other materials at risk of spontaneous combustion shall be deposited and stored in appropriate receptacles. This material shall be removed from the work site on a regular basis and shall be disposed of in an approved existing waste disposal facility. Removal of these materials from the job site is regulated under the *Transportation of Dangerous Goods Act*.
18. All hazardous materials shall be handled according to the provincial *Environmental Protection Act* (2006) and disposed of in accordance with government laws and regulations at an approved off-site hazardous waste disposal facility.

19. Regular inspections of hydraulic and fuel systems on machinery shall be performed, and all leaks shall be repaired immediately upon detection. Worn or damaged hoses, seals and fittings shall be promptly repaired or replaced.
20. All deliveries of fuel shall be in conventional fuel delivery trucks that are operated by licensed distributors.
21. When fuelling equipment, operators shall:
 - a. Be in attendance for the duration of the operation;
 - b. Use leak-free containers and reinforced rip and puncture-proof hoses and nozzles;
 - c. Use hoses that have a design pressure rating of at least 150% of the maximum head of the system;
 - d. Lock out all tank nozzle valves except the valve currently in use;
 - e. Seal all storage container outlets except the outlet currently in use; and
 - f. Ensure drip pans, and other precautionary measures as required, are in place prior to the start of refueling activities.
22. Fuel unloading facilities shall be equipped with drip pans to collect hose drainage and drips. Hoses or pipes used for fuel transfer shall be equipped with properly functioning and approved check valves, spaced to prevent backflow of fuel in the case of failures.
23. A fuel and other hazardous materials spill contingency plan, and appropriate emergency spill equipment, shall be in place on site.
24. All spills of fuel and hazardous materials shall be reported immediately to the EHS Advisor. Any spill of any volume to the marine environment or spills of 70 L or more on land shall be reported immediately in accordance with provincial regulation.
25. Any spill on land regardless of size that may enter a waterbody frequented by fish shall be reported immediately to Canadian Coast Guard Environmental Emergencies: (709) 772-2083 or 1-800-563-9089, as required by the *Fisheries Act* and Section 201 of *Canadian Environmental Protection Act (CEPA)*. All such spills shall also be reported immediately to the EHS Advisor and Production Manager.
26. During the operations phase, Grieg NL shall register and become a member of a local Response Organization (RO) to avail of these services should a spill incident exceed the company's ability to respond.
27. Spill kits shall be maintained at the RAS Hatchery for quick response purposes.
28. All selected response equipment shall be selected for its suitability/acceptability for deployment.
29. All employees and contractors shall be made aware of the Spill Management Plan and their role.
30. All petroleum-based products used in the facility during operation including oils, fuels, and greases shall be reused when possible (e.g., waste oil can be collected and burned).
31. When possible, environmentally friendly options shall be used (e.g., food grade grease/oil).
32. Reduce the use of products such as paints and only paint areas as needed. Unused paint shall be recycled when possible or disposed of at an approved waste disposal area.

4.2 Storage, Handling, and Disposal of Solid Waste

Environmental Concern

The release of solid waste is a concern to human health, drinking water quality, aquatic and terrestrial ecosystems.

Solid waste (e.g., domestic waste, paper, cardboard, wood, metals, etc.) will be generated periodically during operation activities. These wastes, if not properly controlled and handled, will be unsightly and may cause human safety and health concerns. Uncontrolled waste may also attract wildlife leading to potential human-wildlife encounters.

Environmental Protection Procedures

1. The amount of waste generated and requiring disposal shall be minimized as much as possible.
2. All wastes shall be handled according to procedures in Grieg NL's Waste Management Plan and in compliance with all relevant regulations.
3. A refuse wood site shall be identified for local use for disposal of wood pallets and other excess wood materials.
4. Wood products shall be chipped for disposal whenever possible.
5. Scrap steel and plastic products such as piping will be retained by Grieg NL for use in facility repairs.
6. Where this is not practical due to materials being damaged or too small, steel products will be recycled through local companies.
7. Plastic products shall be recycled where possible with disposal only when no other option remains.
8. All waste produced by the fish including fish feces and uneaten feed shall be separated out of solution and treated by mechanical and biological treatment.
9. The collected waste from the fish (sludge with ~20% dry solid content) shall be collected by truck by the Burin Peninsula Waste Management Corporation (BPWMC) or another approved purchaser.
10. All operational debris produced at the facility including general waste, electronic waste, feed bags, pallets, and litter will be recycled, reused or reduced if appropriate (e.g., buy feed and products in bulk, buy products with less packaging, pallets can be reused for transportation within the facility or broken down for chipping, recycle cardboard, feed bags, aluminum cans, plastic bottles and electronic waste, etc.).
11. On-site waste shall be disposed in accordance with the BPWMC.

4.3 Sewage Disposal

Environmental Concern

The release of untreated sewage may pose risks and/or concerns to human health, drinking water quality and marine and freshwater ecosystems.

Environmental Protection Procedures

1. During operations, a BMS Blivet waste water treatment system will be utilized. The Blivet system discharges its treated effluent to dedicated exfiltration galleries installed on the shore of the Marystown Marine Industrial Park. The Town of Marystown also has an operational Abydoz engineered wetlands system, which diverts and treats a relatively small portion of its sanitary sewer contents.

4.4 Storage, Transportation, Handling and Dispensing of Fish Feed

Environmental Concern

Fish feed at the RAS Hatchery site may attract pests (e.g., wild animals) and will also generate plastic feed bag waste.

Environmental Protection Procedures

1. Fish feed will be stored indoors to minimize the attraction of wild animals, eliminate the chance of disease transfer from wild animals, and minimize the lethal control of pests/predators.
2. Feed shall be delivered in bulk and stored in silos.
3. An automatic feeding system shall be used where appropriate based on feeding tables/software, cameras and people to ensure no spill or waste of feed.

4.5 Storage, Handling and Disposal of Fish Mortalities and Ensilage

Environmental Concern

There is concern that the volume of fish mortalities and ensilage generated at the RAS Hatchery may not be properly handled and will overwhelm local disposal facilities. Also, there is concern about the potential transfer of disease from fish to wild animals.

Environmental Protection Procedures

1. A mortality vacuum and ensilage system will be used to transfer dead fish from each facility to a centralized ensilage tank approved for this material.
2. A mortality vacuum system shall be utilized within each facility in the RAS Hatchery.
3. This vacuum system is equipped with a funnel receptacle to transport the fish in a biosecure manner into a grinder that chops the mortalities into small pieces, while a doser adds acid to produce ensilage with a pH of 4.5 or lower.
4. Access to the ensilage storage tank shall be limited to authorized personnel only.
5. Ensilage shall be stored until sufficient quantities are acquired to justify transport to either a local company in Newfoundland that will use the product as a commercial fertilizer and/or animal feed additive or a feed supply company located in Denmark.
6. Ensilage shall be collected by an approved third party using approved transport containers and disposed in the most economical manner (fertilizer, composting or other viable options).

4.6 Biosecurity

Environmental Concern

There is concern about disease transfer amongst fish within the RAS Hatchery. As a component of biosecurity measures at the RAS Hatchery, proper cleaning and disinfection of equipment will be crucial to eliminate potential cross-contamination between tanks and buildings.

Environmental Protection Procedures

A biosecurity plan will be in place prior to operation of the RAS Hatchery and will include the following procedures:

1. The highest standards in biosecurity procedures will be maintained including disinfection of equipment, personnel movements, pest control, maintenance and record keeping procedures for the hatchery. These measures will be clearly outlined in numerous SOPs.
2. Cleaning and disinfection shall occur between events such as grading, between year classes, the transfer of fish from one building to another, and a fish health event.
3. Smaller equipment that is used daily shall be cleaned and disinfected at the end of each shift.
4. Electrical equipment shall be wiped down with disinfectant wipes and heat applied.
5. Tanks shall be cleaned and inspected on a routine schedule.
6. There will be separate, biosecure rooms/buildings for each stage of salmon development.
7. In addition to daily husbandry practices noted above, protocols shall be in place to enhance biosecurity as personnel, equipment, and fish move between rooms and/or buildings.
8. Air movement in and out of the facility as well as pressure is controlled and filtered.
9. Doors are controlled by a central access system where each worker must have the required credentials (embedded into an identification [ID] tag) to enter their work area and may not enter other areas to prevent cross-contamination.
10. Entrance to production halls (i.e., where grow-out tanks are located) require strict biosecurity measures, and are designed accordingly.
11. Personnel shall have separate work clothes for each facility and will be required to change upon entering a new building. Disinfection procedures for personnel and their clothing will also be in place. These and other procedures will be outlined in Grieg NL's Fish Health Management Plan.
12. The day prior to transport of fish from the RAS Hatchery to the sea cages via well boat, all transfer equipment (i.e., pipes, hoses, pumps, counters) shall be checked and prepared, including checking the pipe and hose for breaches.

4.7 Fish Transfers at RAS Hatchery

Environmental Concern

There is concern that smolt from the RAS Hatchery may escape during transfer to the wellboat leading to potential interactions with wild salmon that may affect their biological fitness.

Environmental Protection Procedures

The transfer of smolt shall be in such a way as to minimize the likelihood of escapes through proper equipment use and transfer procedures including:

1. Each RAS Hatchery building shall be equipped with a fish pump and a counting system, which facilitates transfer of fish between tanks and between buildings.
2. Health checks by a veterinarian shall be conducted, including sampling a number of fish from each tank that is being transferred to sea.
3. Smolt shall not be transported if there are any health concerns or until the transfer permit from the DFLR, DFO and Canadian Food Inspection Agency (CFIA) is received.
4. The day prior to transport, all transfer equipment (i.e., pipes, hoses, pumps, counters) shall be checked and prepared, including checking the pipe and hose for breaches.
5. A checklist shall be followed on the day of transfer for personnel at the hatchery.
6. Fish shall only be transferred to the well boat from the facility during calm conditions.
7. Fish are transferred via flexible hose transfer pipes which will only be connected when in use and stored when not in use.
8. Smolt shall be transferred to a well boat via a double pipe (~150 m in length) leading from the Post-Smolt Facility to Mortier Bay. The pipeline shall be constructed such that a protective sacrificial pipe surrounds the transfer pipe, protecting the transfer pipe from wear and abrasions.
9. A reinforced, continuous hose extending ~50 m from the shoreline to the well boat shall be used to transfer the fish. The hose will sit at the water's surface and shall be continuously monitored by personnel.
10. Fish shall be counted via video monitoring and a counter as they exit the hatchery and as they enter the well boat.
11. Drop nets of appropriate mesh size and sufficient size to cover the entire work area shall be placed under the work area and above the sea surface to contain any fish in the event one is "dropped" while being handled.

4.8 Groundwater Use

Environmental Concern

Water that will be used to initially fill the RAS Hatchery tanks, as make-up water to replenish the small amount of water lost due to evaporation, and to supply water to the hatching units (maximum 300 L/min) will be supplied by a nearby well, located in the town of Marystown near the intersection of McGettigan Boulevard and Centennial Road (47.180115°N, 55.142401°W). The well was drilled specifically for the Project, with the intention of reducing the effects on Marystown's municipal water supply.

There is concern that water use by the RAS Hatchery may become contaminated and/or become depleted thereby impacting hatchery operations.

Environmental Protection Procedures

1. A groundwater monitoring system will be in place prior to operation of the RAS Hatchery.
2. Water levels in the well shall be monitored via the installation of a level monitoring system and routine (i.e., monthly) water samples tested for deviations from samples collected during initial well tests.
3. A back-up water supply will be identified as part of a contingency plan for the RAS Hatchery including contingency for failure of the pump and/or well. This contingency plan will be developed for DMAE approval prior to operations.
4. To confirm water use numbers, a well-head protection and water quality monitoring plan (ambient and real-time) will be developed for DMAE approval prior to operations.
5. The RAS Hatchery facilities requiring the largest volume of water shall be located on the down slope portion of the building site so that water can be gravity fed, thereby reducing the pumping energy requirements.
6. The local water reservoir is a surface water supply source. Grieg NL will be utilizing a groundwater source for its operations that will not impact the town water supply.

5.0 Contingency Plans

Contingency plans to address incidents and unplanned situations that may occur during the operation of the RAS Hatchery have been developed and will be modified as required. Grieg NL has developed a separate Emergency Response Plan that details procedures for personnel health and safety and response to accidents, malfunctions, and emergencies. Grieg NL has also developed a Spill Management Plan. These documents are the first point of reference for emergency responders in case of an emergency on site. Information provided in this section is meant to support the Emergency Response and Spill Management Plans and be available as an additional reference.

The following contingency plans have been developed to address accidental and unplanned situations that may occur during the operation phase at the RAS Hatchery:

- Fuel and Hazardous Materials Spills
- Forest Fires
- Wildlife Encounters
- Extreme Weather Events
- Discovery of a Species At Risk
- Mass Mortality Event
- Catastrophic Failure of Water Supply

Notwithstanding these contingency plans, Grieg NL supports preventative measures as the first line of defence against the possibility of incidents.

5.1 Fuel or Hazardous Material Spills

Grieg NL will lead and coordinate any field response to environmental incidents related to their activities. During operation of the RAS Hatchery, it is anticipated that spilled material will be primarily fuel, lube, and hydraulic fluid originating from equipment wear and tear and/or malfunction. Therefore, in the event of a spill, procedures for responding to hydrocarbon spills outlined herein, shall apply:

1. Assess the situation (Safety First). Personnel shall not approach the spill area without appropriate PPE.
2. Identify priorities while considering the threat to people, property, and the environment.
3. Initiate the appropriate response actions:
 - The individual who discovers the leak or spill shall make a reasonable attempt to immediately stop the leakage and contain the flow, where safe to do so.
 - Contact emergency personnel and request additional support if necessary.
 - Reporting: spill location, type of product, estimated volume and terrain condition at the spill site will be determined and reported immediately to Grieg NL's EHS Advisor for further reporting to authorities, as appropriate.
 - Initiate the containment and recovery of any free product and/or contaminated material.

4. Dispose of all waste material in the appropriate manner.
5. Restore the site to the satisfaction of the Project representative or governing regulatory body.
6. Document and investigate as required.

Reportable spills include:

- A spill or leak greater than 70 L on land;
- A spill or leak on land, regardless of quantity, that has the potential to contaminate nearby property or enter a water body or sewer;
- Spills or leaks from storage tanks; or
- A spill or leak in the water, regardless of quantity.

Spills meeting the above criteria shall be reported immediately to regulatory authorities via the **Environmental Emergency Report Line at (709) 772-2083 or 1-800-563-9089**.

In reaching decisions on containment and clean-up procedures, the following criteria will be applied:

- Minimize danger to persons;
- Minimize pollution of water courses;
- Minimize area affected by spill; and
- Minimize the degree of disturbance to the area and watercourses during cleanup.

Grieg NL will take all necessary precautions to prevent a reoccurrence of the incident and the EHS Advisor shall prepare a written report as required.

All fuel-powered equipment shall contain appropriately-sized spill kits (23 L). The contents of spill kits shall be routinely inspected and supplies replenished as necessary.

In the event of fuel or hazardous material spills, Project personnel are also to refer to Grieg NL's Spill Management Plan: Land and Water, and emergency contact phone numbers (first page [i]) and section 4.0, *Emergency Response*, of Grieg NL's Emergency Response Plan.

5.2 Forest Fires

A fire at the RAS Hatchery site has the potential to spread to the surrounding area. Conversely, a forest fire or fire at another facility within the Marystown Marine Industrial Park could spread to the RAS Hatchery site. Terrestrial fires could result in habitat alteration or loss and/or mortality of wildlife. Fire fighting chemicals or spilled materials associated with fires could enter freshwater or marine environments, potentially negatively affecting habitat and biota, particularly if permitted to disperse and persist. Fires may also adversely affect air quality and pose risks to human health and safety.

Grieg NL shall take all necessary precautions to prevent fire hazards when working at the site, including, but not limited to, the following:

- Adhering to appropriate permits, including operating permits.
- Storing, handling and disposing of flammable materials and waste appropriately and in accordance with appropriate regulations.
- Smoking in designated areas only.
- Ensuring personnel trained in fire prevention and response including the use of appropriate fire-fighting equipment will be available on site.
- Providing fire-fighting equipment that is in proper operating condition, in compliance with manufacturer standards, and in sufficient quantities.
- Ensuring all fire extinguishers are marked and easily accessible to anyone who may need to use them.

If a fire is encountered, the following protocol shall be followed:

- The individual who discovers the fire shall raise the alarm to alert all on-site personnel.
- Immediately stopping work and controlling all sources of further ignition.
- Personnel trained in fire-fighting and the use of appropriate equipment shall take immediate steps to contain or extinguish the fire.
- Fires shall be reported immediately to the EHS Advisor, Marystown Fire Department, and the nearest Forest Management Unit office for further reporting to the local authorities. The following information shall be provided:
 - name and telephone number
 - time of detection
 - size of fire
 - location of fire
 - weather conditions (rain, sun, wind direction and speed, etc.)
- Follow the appropriate route to the construction site muster station.

Personnel are also referred to Section 7.1, *Fire Emergency Plan (Land-based RAS Hatchery)* of Grieg NL's Emergency Response Plan for fire prevention and response actions.

5.3 Wildlife Encounters

Wildlife encounters pose a potential risk for stress or injury to both the wildlife and site personnel. To reduce the risk to both wildlife and site personnel, the following measures will be implemented:

- Hunting, trapping or fishing by Project personnel is not permitted on site.
- Site and working areas shall be kept clean of food scraps and garbage.
- Wildlife protected disposal containers will be used and will be regularly emptied and transferred to the local landfill.
- No personal pets, domestic or wild, will be allowed on the site.

In addition to the above protection measures, the following protocol will be followed in the event of a wildlife encounter:

- Workers shall not attempt to chase, catch, divert, follow or otherwise harass wildlife by vehicle or on foot.
- Equipment and vehicles shall yield the right-of-way to wildlife.
- Wildlife sightings or encounters shall be reported to the EHS Advisor. All actions in response to nuisance animals shall be the responsibility of Grieg NL.
- If the nest of any bird is encountered during operation activities, work around the nest will be immediately stopped and the EHS Advisor notified.
- Any incidents that result in the displacement or killing of wildlife shall be reported to the EHS Advisor, complete with details on the incident and the names (and contact information) of the persons involved, for reporting as required.

5.4 Extreme Weather Events

Extreme weather events, such as severe winter storms, hurricanes or post-tropical storms, can bring strong winds, heavy snow, rain or freezing rain, flooding, high waves or ice. Such events can disrupt unsecured materials or equipment, or damage buildings. In anticipation of an extreme weather event, precautionary measures to prevent negative impacts to the environment include:

- Securing loose materials, coverings and containers, including waste containers.
- If applicable, appropriately collecting and disposing/storing product from equipment drip pans or tank dyke pads and ensuring drainage equipment is in good condition and clear of debris, snow or ice.
- Checking that sedimentation control structures are secure and in good working order, and capable of handling anticipated flow.

Immediately following an extreme weather event, all on-site environmental protective measures will be checked. Any required repairs will be completed as soon as conditions allow, before any work occurs utilizing the equipment to be repaired/replaced.

5.5 Discovery of a Species at Risk

The following species at risk (as listed on Schedule 1 of the *Species at Risk Act [SARA]*) may occur within the RAS Hatchery site: Red Crossbill (Endangered), Olive-sided Flycatcher (Threatened), Peregrine Falcon (Special Concern), and Rusty Blackbird (Special Concern). Though unlikely to be found within the RAS Hatchery site, these species may occur within the general area.

There is some potential that operation activities may affect Species at Risk. The following measures will be put into place to ensure that the Project does not negatively affect Species at Risk:

- All personnel working on site will adhere to all stipulations set out in the *SARA*, and will be informed that it is illegal to kill, harass, capture or harm any species listed under it; and
- If a Species at Risk, as listed above or otherwise, is discovered, all work in proximity to the location (i.e., outside of the RAS Hatchery) will cease and it will be reported to the EHS Advisor who will then contact ECCC-CWS for further action.

5.6 Mass Mortality Event

If a mass mortality of salmon occurs at the RAS Hatchery, there is concern that the volume of fish mortalities may not be properly handled and will overwhelm local disposal facilities. Also, there is concern about the potential transfer of disease from fish to wild animals. The following procedures will be undertaken:

- Grieg NL would implement its mass mortality response plan (detailed in Grieg NL's Waste Management Plan) which includes the notification of regulatory agencies and activation of depopulation, if required.
- All mortalities at the RAS Hatchery will be removed using equipment and procedures similar to those used during fish transfers to sea cage sites. In this instance, either a well boat or an OCI vessel equipped with industry standard containers will be used to transport the mortalities to a designated outflow wharf in a biosecure manner.
- Biosecure handling and transport will be undertaken to avoid any spillage.
- In the case of a confirmed presence of a reportable fish disease, Grieg NL will contact local providers that are approved to receive the collected mortalities as well as the fish that are live harvested and weigh less than 1 kg.
- If the mass mortality event is not as a result of a reportable disease, the mortalities will be collected and ensilaged to dispose as outlined in Section 4.5
- Fish that weigh more than 1 kg would be harvested and processed according to CFIA recommendations.
- Grieg NL will adhere to governmental guidelines and regulations for the disposal of organic material and fish mortalities

5.7 Catastrophic Failure of Water Supply

There is concern that failure with the well supplying the RAS Hatchery or the pump for the well may jeopardize operations and lead to the mortality of hatchery fish. As requested by the DMAE, Grieg NL will provide a contingency plan for such an unplanned event prior to commencement of hatchery operations.

The cause of the catastrophic failure will determine the course of action:

- Should there be a break in the line supplying the water, the system will be able to continue to run until repairs can be made.
- If the well were to collapse, one of the backup wells would be used to supply water to the facilities.
- If the groundwater were to become polluted, then water from Mortier Bay would be used. A desalination system will be installed in the facility allowing saltwater to be used as a source for the facility if required.

6.0 Legislation, Permits and Authorizations

Grieg NL has identified the various legislation, permits and authorizations to which the company subscribes related to the Project's environmental aspects—see below.

6.1 Legislation

Relevant legislation for the construction of the RAS Hatchery component of the Project includes the following:

- *Fisheries Act*
- *Navigation Protection Act*
- *Transportation of Dangerous Goods Act*
- *Migratory Birds Convention Act*
- *Aquaculture Act*
- *Lands Act*
- *Environmental Protection Act*
- *Urban and Rural Planning Act*
- *Water Resources Act*
- *Occupational Health and Safety Act*
- *Buildings Accessibility Act*
- *Public Safety Act*
- *Fire Prevention Act*
- *Canada Shipping Act*
- Aquaculture Activities Regulations (AAR)
- Town of Marystown Development Regulation
- National Aquatic Animal Health Program
- Tier Three Regulations of Transport Canada
- Annex IV of MARPOL 73/78: Pollution by Sewage from Ships
- Annex V of MARPOL 73/78: Pollution by Garbage from Ships
- Annex VI of MARPOL 73/78: Regulations for the Prevention of Air Pollution from Ships

6.2 Permits and Authorizations

In Canada, the aquaculture industry is regulated and managed by both the federal and provincial governments. Grieg NL is required to adhere to these regulations. The Project must also comply with provincial and municipal regulations related to the operation of the RAS Hatchery. A list of required key permits and approvals is provided in Table 6.1. Grieg NL will house and manage permits and authorizations in dedicated software (i.e., *Intelix*, business intelligence software).

In addition to the abovementioned required permits and authorizations for Project activities, Grieg NL must abide by the National Code on Introductions and Transfers of Aquatic Organisms, whereby Grieg NL is required to submit an application to DFLR and DFO, which addresses three main risks: genetics, ecosystem and disease prior to any transfer of the fish from the RAS Hatchery to the sea cages for

grow-out. The fish will not be permitted to leave the RAS Hatchery until approvals from DFLR and DFO are received.

Table 6.1. Anticipated federal, provincial and municipal approvals and permits for the operation phase of the RAS Hatchery.

Permit, License or Regulatory Approval	Activity Requiring Approval	Legislation	Regulatory Agency Responsible	Status ^a
Government of Canada				
DFO Approval	Any aquaculture activities	<i>Fisheries Act</i>	DFO	
Aquatic Animal Health Import Permit	Import of fish eggs	National Aquatic Animal Health Program	CFIA	
Government of Newfoundland and Labrador				
Aquaculture Licence	Any aquaculture activities	<i>Aquaculture Act</i>	DFLR	
Minister's Approval for the Introduction, Transfer and Transport of Fish	Transportation of fish from one site/facility to another	<i>Aquaculture Act</i>	DFLR	
Application for Crown Land Title	Leasing of land for the land-based facility	<i>Lands Act</i>	DFLR	
Development Certificate	Construction and operation of the land-based facility	<i>Urban and Rural Planning Act</i>	DFLR	
Application for Permit Water and Sewage Works	Obtaining/discharging water for use in construction and operation of the land-based facility	<i>Water Resources Act</i>	DFLR	
Diesel Generator Registration Form	Operation of a generator	<i>Environmental Protection Act</i> and <i>Air Pollution Control Regulations</i>	DFLR	
Water Use Licence	Obtaining water for use in the land-based facility	<i>Water Resources Act</i>	DFLR	
Certificate of Approval for Industrial Facilities/Processes	Operation of the land-based facility	<i>Environmental Protection Act</i>	DFLR	
Permit for Flammable and Combustible Liquid Storage	Storage of flammable and combustible liquids	<i>Environmental Protection Act</i>	DFLR	
Certificate of Approval - Water Supply >4,500L/day	Obtaining water for use in the on-land facility	<i>Water Resources Act</i>	DFLR	
Fire Commissioners Approval under the National Building / Fire / Life Safety Code	Construction of any buildings		Service NL	
Petroleum Storage Tank Registration	Storage and Handling of Petroleum Products	<i>Environmental Protection Act</i> and <i>Fire Prevention Act</i>	Service NL	
Electrical Permit	All electrical wiring and infrastructure installation	<i>Public Safety Act</i>	Service NL	
Certificate of Plant Registration for Power, Heat, Refrigeration, Compressed Gas or Combined Plant	Various project related activities		Service NL	
Municipal Government				
Occupancy Permit	Permits must be in place for any development of the land-based facility	Town of Marystown Development Regulations	Marystown Municipal Government	
Compliance with Marystown Municipal Plan	Permits must be in place for any development of the land-based facility	Town of Marystown Development Regulations	Marystown Municipal Government	

Note: ^a The status of the permits will be included prior to commencement of operations.

Grieg NL may also need a Domestic Movement Permit Application to move Finfish and/or Things within Canada (CFIA/ACIA 5743) from CFIA. Whether a permit is required to move aquatic animals or equipment (including nets and cages) depends on the declarations of the reportable disease status of the areas being transferred from and to. CFIA must be contacted by Grieg NL prior to any domestic movements of fish or equipment.

7.0 Contact List

Contact lists will be posted in central, visible locations at the RAS Hatchery. The lists will be kept up to date, and all contacts on the lists will be made aware of their expected role(s) during routine and/or emergency situations.

7.1 Emergency Numbers

Contact information that may be utilized during an emergency is provided in Table 7.1.

Table 7.1. Emergency contact phone numbers for the Project.

Title	Number
Emergency Personnel	911
Marystown Ambulance	709-279-2121
Marystown Fire Department	709-279-1333
Burin Peninsula Health Care	709-891-1040
Marystown Police	709-279-3001
Poison Control	1-866-727-1110
Search and Rescue	1-800-563-2444
Canadian Coast Guard	709-772-4423
Marine Pollution	1-800-563-9089
Emergency Response Organization	TBD
Marine Communication and Transport Center, Placentia	709-227-2181
Marine Mammal in Distress	1-888-895-3003
Poaching and Fisheries Violations	1-800-222-8477
Department Fisheries and Land	709-292-4111
Department Fisheries and Oceans	709-772-5202
Invasive Aquatic Species	1-888-435-4040

7.2 Advisory and Other Contact Numbers

Contact information for appropriate Grieg NL and other advisory personnel are provided in Table 7.2. These designated personnel can be reached at any time, in accordance with established communications protocols.

Table 7.2. Advisory and other contact numbers for the Operation of the RAS Hatchery.

Title	Name	Number
Grieg NL General Manager		TBD
Grieg NL Production Manager		TBD
EHS Advisor		TBD
Owner Representative		TBD
Contractor Project Manager	TBD	TBD
Contractor EHS Coordinator	TBD	TBD
First Feeding Site Manager	TBD	TBD
Smoltification Manager	TBD	TBD
Post Smolt Manager	TBD	TBD
Marine Site Manager	TBD	TBD
Marine Site Manager	TBD	TBD
Marine Site Manager	TBD	TBD
Water Quality Specialist		TBD
EHS Representative land-based	TBD	TBD
EHS Representative marine	TBD	TBD

8.0 Resource Material

Information documents relevant to the Project were included as appendices to the Environmental Impact Statement (EIS). Copies of the EIS and associated documents can be found at Grieg NL's office in Marystown and at public libraries in Marystown (as well as Corner Brook and St. John's).

8.1 Key Reference Material

Environmental documents previously completed for the Project and relevant to the RAS Hatchery are listed in Table 8.1. Personnel are also referred to further documentation referenced throughout this EPP.

Table 8.1. Key Project reference material relevant to environmental protection measures, for construction of the RAS Hatchery. Material was provided as appendices to the Project EIS (LGL Limited 2018).

Document Name and Author	Summary	Release Date
Emergency Response Plan Grieg NL	Details the emergency procedures to be implemented in response to any situation that may endanger the safety and/or health of people; the environment; property and/or equipment.	May 2018
Spill Management Plan: Land and Water Grieg NL	Details the emergency procedures to be implemented in response to a spill that may endanger the safety and/or health of people; the environment; property and/or equipment.	May 2018
Waste Management Plan Grieg NL	Details the procedures to be implemented to manage waste associated with the Project including waste generated during construction of the RAS Hatchery.	May 2018
Fish Health Management Plan Grieg NL	Details the procedures to be implemented to manage fish health at the RAS Hatchery (as well as the sea cage sites).	May 2018
The Cultural, Recreational and Commercial Importance of the Waters of Placentia Bay Component Study Grattan et al. 2018	Provides a detailed description of the cultural, recreational and commercial usage of Placentia Bay. It focuses on fisheries, tourism, recreational activities, marine navigation, and culturally and ecologically important areas. The study also includes mitigation measures that will be undertaken to protect these uses and areas from the potential effects of the Project, as well as follow-up monitoring.	May 2018
Wild Atlantic Salmon Component Study LGL Limited 2018	Provides a review of wild Atlantic salmon with a focus on the salmon that occur in Placentia Bay. It also reviews the potential genetic and ecological interactions between wild and farmed salmon and the mitigation measures and follow-up monitoring intended to minimize the potential effects of Grieg NL's Project.	May 2018
Fish and Fish Habitat Component Study LGL Limited 2018	Provides a review of the existing fish and fish habitat in Placentia Bay with focus on the sea cage sites, the mitigation measures intended to minimize the potential effects of the proposed Project on fish and fish habitat, and the follow-up monitoring intended to validate the effects conclusions in the EIS.	May 2018
Sustainability Report 2017 Grieg Seafood	Defines Grieg's five essential principles for sustainable food production in the ocean and introduces a greenhouse gas account which maps emissions from Grieg Seafood as an organization.	April 2018

9.0 Literature Cited

LGL Limited. 2018. Environmental Impact Statement of the Placentia Bay Atlantic Salmon Aquaculture Project. LGL Rep. FA0144. Rep. by LGL Limited, St. John's, NL for Grieg NL, Marystown, NL. 528 p. + appendices.

2018

**PLACENTIA BAY ATLANTIC SALMON AQUACULTURE PROJECT
ENVIRONMENTAL PROTECTION PLAN (EPP):
RAS HATCHERY CONSTRUCTION**



GRIEG NL

9/19/2018

003051

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Preface

Grieg NL's Environmental Protection Plan (EPP) for the Placentia Bay Atlantic Salmon Aquaculture Project is a directive document that provides detailed steps to avoid or minimize negative effects on the environment. The EPP covers construction of the Recirculating Aquaculture System (RAS) Hatchery located in Marystown, Newfoundland and Labrador (NL). The responsibilities and procedures presented in this document are designed to ensure the efficacy of the plan and to allow for ongoing updates to the plan to accommodate improvements. This Preface includes overviews of the following:

- Distribution List
- EPP Responsibilities
- EPP Revision Procedures

Distribution List

The EPP will be provided to relevant Grieg NL personnel, contractors, subcontractors, and government agencies designated as having a surveillance responsibility.

Grieg NL Personnel

- General Manager
- Production Manager
- Environment, Health and Safety Advisor
- Owner Representative
- Grieg NL Site Manager(s) (Land and Sea) where appropriate

Contractors

- General Manager
- Environment, Health and Safety Manager

Subcontractors

- General Manager
- Environment, Health and Safety Manager

Government Agencies

- Department of Municipal Affairs and Environment (DMAE)
- Department of Fisheries and Land Resources (DFLR)
- Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada (ECCC)
- Transport Canada

EPP Responsibilities

The responsibilities of Grieg NL and its employees as well as those of contractors and subcontractors are summarized below.

As the proponent, Grieg NL shall:

- Provide approval for the final issued version of the EPP and subsequent revisions.
- Inspect and monitor project activities during construction of the RAS Hatchery.
- Conduct EPP reviews on a regular and as-needed basis.
- Communicate with relevant government agencies and local stakeholders as required.

The Grieg NL Environment, Health and Safety (EHS) Advisor or their designated representative(s) shall:

- Be responsible for implementation of the EPP.
- Review and approve revision requests.
- Conduct EPP reviews on a regular and as-needed basis.
- Maintain document control.
- Ensure the EPP holders and their personnel are familiar with the EPP and its procedures.
- Strive for compliance with all permits, authorizations, and approval conditions; and ensure that appropriate supervisory personnel are on site during project activities as appropriate.

The Grieg NL Site Managers or their designated representative(s) shall:

- Distribute revisions to EPP holders.
- Be familiar with all aspects of the EPP.
- Confirm that all activities are conducted in accordance with the EPP.
- Hold an environmental awareness session for each Contractor and its personnel, and other personnel to be involved in the Project.
- Report on the efficacy of the EPP.
- Attend weekly contractor meetings.
- Identify any deficiencies in the plan and propose appropriate changes.
- Direct appropriate contingency actions and enact external notifications procedures in the event of an incident.
- In his or her absence, designate a qualified replacement.
- Manage the environmental inspection and monitoring needed to meet EPP requirements and reporting requirements of Grieg NL.

EPP holders shall:

- Keep EPP copy current and enter all revisions on the revision control record.
- Familiarize themselves and their personnel with the EPP and any revisions.
- Initiate changes to improve the EPP.

Contractors, Subcontractors and Site Personnel shall:

- Become familiar with the EPP.
- Become knowledgeable of reporting procedures.
- Comply with the EPP, contract requirements, and applicable laws/regulations.
- Obtain applicable permits, approvals and authorizations in coordination with Grieg NL personnel.
- Attend all required EHS training and orientation programs.
- Report all incidents of non-compliance with the EPP.

EPP Revision Procedures

The EPP is a controlled document and revisions may only be made with the approval of Grieg NL. EPP users are encouraged to submit suggestions for changes and improvements to the EPP, using the *EPP Revision Request Initiation Form* (see below). Upon receipt of suggestions, and where appropriate, designated Grieg NL personnel will prepare a proposed revision to be submitted for approval by Grieg NL's EHS Advisor or another designated representative. Approved revisions will be issued to all members of the EPP Distribution List (see above), accompanied by a Revision Control Record (see below), which will provide the EPP section(s) being superseded and revision instructions. Each revision will also be accompanied by an updated EPP Table of Contents.

Within two working days of receiving an approved EPP revision, EPP users are to:

- Confirm all listed pages have been received in accordance with the Revision Control Record;
- Read the revised text;
- Insert the revised pages into the appropriate position within the EPP, and remove and destroy the superseded pages;
- Confirm the EPP document is in accordance with the updated Table of Contents;
- Enter the revision number and date on the Revision Control Record, and sign; and
- Incorporate the revision into Project activities, and ensure all personnel are familiar with the revision.

Grieg NL Placentia Bay Atlantic Salmon Aquaculture Project Environmental Protection Plan (EPP)

Revision Request Initiation Form

Name:

Affiliation (Position and Company / Government Department):

Date (D-M-Y):

EPP Section to be Revised:

Nature of Revision (e.g., sewage disposal, noise control, etc.):

Rationale for Revision (e.g., environmental or worker safety, etc.):

Suggested Revision:

Please submit to TBD, Production Manager, Grieg NL at the following address:
205 McGettigan Blvd., Marystown, NL A0E 2M0

Revision Control Record for the EPP

Revision Number	Date (D-M-Y)	Revised EPP Section(s)	Revision Instructions and Source	EPP Holder's Signature

List of Acronyms

AAR	Aquaculture Activities Regulations
ATV	All-terrain Vehicle
BMA	Bay Management Area
BPWMC	Burin Peninsula Waste Management Corporation
CEPA	<i>Canadian Environmental Protection Act</i>
CWS	Canadian Wildlife Service
DFLR	Department of Fisheries and Land Resources
DFO	Fisheries and Oceans Canada
DMAE	Department of Municipal Affairs and Environment
ECCC	Environment and Climate Change Canada
EHS	Environment, Health and Safety
EIS	Environmental Impact Statement
EPP	Environmental Protection Plan
FCR	Feed Conversion Ratio
GAP	Gasoline and Associated Products
MBCA	<i>Migratory Birds Convention Act</i>
MBR	Migratory Birds Regulations
MSDS	Material Safety Data Sheets
NL	Newfoundland and Labrador
NLDGS	Newfoundland and Labrador Department of Government Services
NLDNR	Newfoundland and Labrador Department of Natural Resources
OCI	Ocean Choice International
PPE	Personal Protection Equipment
RAS	Recirculating Aquaculture System
SARA	<i>Species at Risk Act</i>
SOP	Standard Operating Procedures
WHMIS	Workplace Hazardous Materials Information System

1.0 Introduction

This Environmental Protection Plan (EPP) has been developed by Grieg NL to describe environmental protection procedures for activities associated with the construction of the land-based hatchery, which is a key component of the Placentia Bay Atlantic Salmon Aquaculture Project. The hatchery facility, referred to as the Recirculating Aquaculture System (RAS) Hatchery, is located in the Marystown Marine Industrial Park adjacent to Mortier Bay. The EPP has been developed in compliance with a condition of the Project release issued by the provincial Department of Municipal Affairs and Environment (DMAE) at the conclusion of an environmental assessment process. The EPP will serve as a set of instructions for Project-related activities and will list the various environmental permits and authorizations to be issued by different agencies. Separate EPP documents will be prepared for operation of the RAS Hatchery and construction and operation of the sea cage sites in Placentia Bay.

This Grieg NL EPP is considered a living document and will be reviewed and updated on a regular and as-needed basis throughout the various stages of the Project life. Consequently, this is a controlled-distribution document, intended to be maintained in an updated condition by each listed/approved recipient (see Preface for details).

1.1 Purpose of the EPP

The EPP is an important component of overall Project planning and implementation of Project activities. It is considered part of Grieg NL's overall Environment, Health and Safety management system (see Section 3).

The EPP is a stand-alone document describing the responsible Project staff and environmental protection procedures for activities associated with the construction of the RAS Hatchery. Environmental protection procedures for the operation phase and decommissioning and rehabilitation phase of the Project will be developed at a later date. In addition, the EPP clearly outlines responsible company personnel include front-line workers, occupational health and safety and environmental staff.

This EPP will be used to ascertain that Grieg NL's environmental-related commitments are implemented, adhered to, and monitored. The EPP will serve to:

- Provide a record of mitigation measure implementation.
- Provide a functional management framework to ensure regulatory compliance and to identify opportunities for continuous improvement in environmental performance.
- Identify and document compliance with applicable legislation, permits and authorizations associated with each Project phase and ensure adequate communication with government environmental surveillance staff.

1.2 Organization of the EPP

The EPP is organized as outlined below and is designed to address DMAE requirements and to facilitate ease of use:

Preface – Identifies the distribution list for the EPP and provides document revision and control procedures.

Section 1: Introduction – Lays out the organization of the EPP and overviews the purpose of the document.

Section 2: Overview of the Project – Highlights the key components, location, activities, and timeline for the Project to provide context for the EPP user.

Section 3: Environment, Health and Safety System – Overviews Grieg NL's Environment, Health and Safety (EHS) system, the relationship of the EPP to the Grieg NL Policy on sustainability; the organization, development and implementation of the EPP; and employee environmental orientation.

Section 4: Environmental Protection Procedures – Details environmental protection procedures to be employed during routine construction activities. This section also includes a summary of key environmental concerns associated with Project activities.

Section 5: Contingency Plans – Provides contingency plans for potential unplanned and accidental events such as spills of fuel or other hazardous material, wildlife encounters, and the discovery of historic resources.

Section 6: Legislation, Permits and Authorizations – Outlines the legislation, required permits, approvals and authorizations for the construction of the RAS Hatchery.

Section 7: Contact List – Provides emergency, advisory and other contact numbers for corporate personnel, contractors, external resources and regulators.

Section 8: Resource Material – Identifies guidelines and resource material relevant to environmental protection measures, mitigation and monitoring.

2.0 Project Description

The Placentia Bay Atlantic Salmon Aquaculture Project has two primary components: (1) a land-based Recirculating Aquaculture System (RAS) Hatchery located in the Marystown Marine Industrial Park and (2) sea cage sites located in the northern portion of Placentia Bay that will be used to grow the salmon to market size (Figure 2.1). The development of the Project, including construction and operation of the RAS Hatchery and sea farms, will undergo a phased approach before reaching peak production of seven million salmon per year. It is anticipated that the RAS Hatchery will be operational in Year 2 and reach full production capacity in Year 6. The first harvest at peak production at the sea farms is anticipated to occur in Year 8.

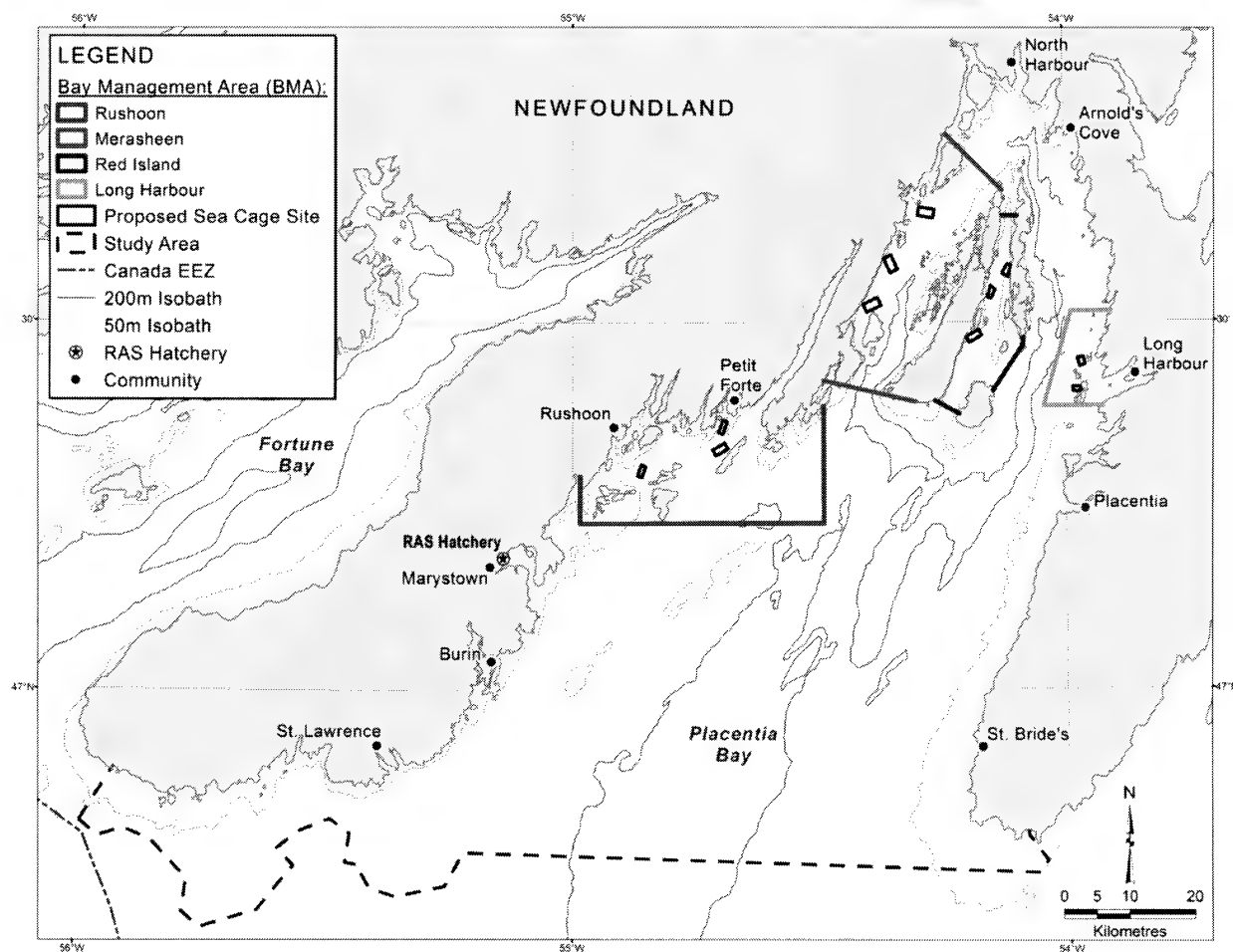


Figure 2.1. The locations of the RAS Hatchery, sea cage sites, and Bay Management Areas for Grieg NL's Placentia Bay Atlantic Salmon Aquaculture Project. [Also shown is the Study Area used in the Environmental Impact Statement].

At the RAS Hatchery, smolt will be grown to sizes ranging from 350–1,400 g and then will be transferred to a well boat and delivered directly to sea cage sites. Eleven sea cage sites will be located within four Bay Management Areas (BMAs), which have been established for biosecurity purposes. Three of the

BMA's are planned for semi-annual production and one BMA is planned for seasonal production. The semi-annual and seasonal sea cage sites will each have a maximum of 12 and 6 sea cages, respectively. Each of these sea cages can hold 160,000 salmon. At peak production, there will be seven active sea cage sites with 78 sea cages in operation per year. Each year, the sea cage sites in one BMA will be fallowed before the sea cages will be restocked with salmon.

Each sea cage site will be attended by several vessels including a feed/accommodation barge, satellite feed barge, service vessel, crew vessel, and a work boat. Once salmon have reached market size (~5 kg) they will be transferred to a dead hold vessel and then onto a third-party for processing.

Personnel working at the sea cage sites will be transported via dedicated crew vessels. Grieg NL anticipates one-week shifts at sea where personnel will live aboard the feed/accommodation barge. The crew change sites will have specific areas for embarkation to and disembarkation from the proposed sea cage sites, which is designed to avoid cross-contamination. Crew changes for the proposed sea cage sites in the Rushoon, Merasheen and Red Island BMA's will be conducted in Petit Fort and in Long Harbour for the Long Harbour BMA.

Services and supplies for all BMA's will be provided using wharf facilities at two former Ocean Choice International (OCI) premises, one each in Marystown and Burin. One of the resupply sites will be designated "inflow" and the other "outflow" to prevent cross-contamination of clean/new equipment going to the sea cage sites and used equipment returning for cleaning and servicing. Additionally, the resupply site designated as outflow will receive waste from the sea cage sites.

2.1 RAS Hatchery

The RAS Hatchery consists of three primary biosecure facilities (i.e., First-Feeding, Smoltification, and Post-Smolt) that have a total area of 30,000 m² (Figure 2.2). The site for the RAS Hatchery in the Marystown Marine Industrial Park was cleared in 2016 and 2017. However, blasting and some grubbing remains to be done before construction on the buildings can commence. The lots in the Marystown Marine Industrial Park are already serviced with three-phase power, municipal water and sewer, and a paved access road. The RAS that will be used at the hatchery is considered state-of-the-art and operates by filtering water from the fish tanks so it can be reused. The system uses 300 L of water per minute versus the 500,000 L of water per minute, which is typical in a flow-through system that is not reusing any water to accomplish an equivalent production of smolt.

2.2 Sea Cage Sites

The proposed sea cage sites (see Figure 2.1) have areas ranging from 0.8 km² to 3.2 km² and occur in water depths ranging from ~10 m to 308 m. Sites have been selected based on suitable water currents and depths, bottom type, shelter from wind and waves, and input from local users and regulatory agencies. Semi-annual and seasonal sea cage sites will have 12 or 6 sea cages, respectively; sea cages will be arranged in a line with a feed barge located between the cages. The sea cages and associated mooring system used to house fish will be state-of-the-art, heavy duty Aqualine Midgard Systems. Each sea cage is 50 m in diameter, extends 45 m below the surface, and will consist of a cage net, floating collar, gangway, sinker ring (tube), winches, and fish mortality removal system.

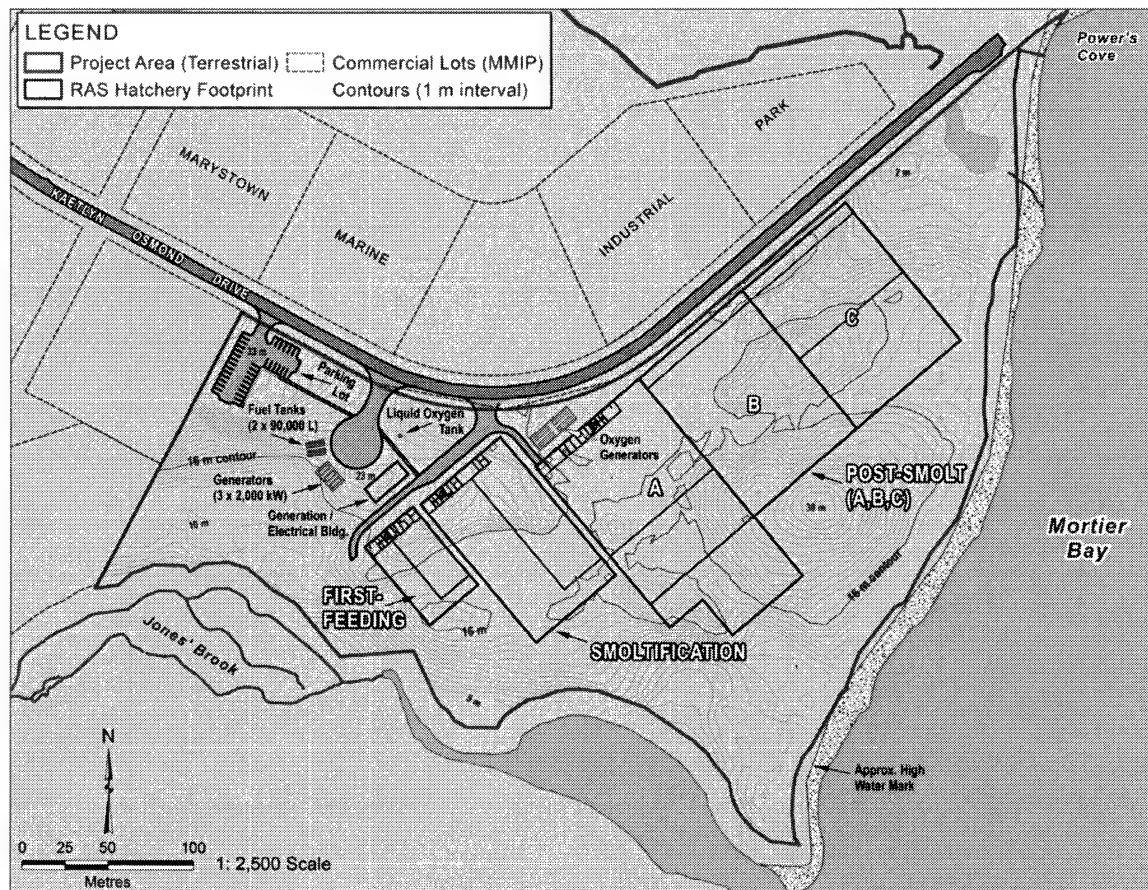


Figure 2.2. Schematic of RAS Hatchery in the Marystown Marine Industrial Park.

2.3 Best Available Technology

Grieg NL will use the best available technology at the RAS Hatchery and sea cage sites, along with a number of mitigation measures that go beyond the common aquaculture industry standard. These measures include such approaches as the utilization of sterile triploid all-female Atlantic salmon to minimize potential effects on wild salmon, the use of lumpfish (*Cyclopterus lumpus*) to control sea lice, and following protocols that exceed government requirements.

3.0 Environment, Health and Safety Management System

Grieg NL recognizes environmental protection as one of their guiding principles and a key component of sound business performance. Grieg NL is committed to providing a quality service in a manner that ensures a safe and healthy workplace for its employees and minimizes potential negative effects on the surrounding environment. Grieg NL will operate in compliance with all federal, provincial and municipal environmental legislation, and strive to use pollution prevention and environmental best practices whenever possible.

Grieg NL's EHS system will:

- Integrate the consideration of environmental concerns and interactions into all decision making and activities.
- Promote environmental awareness among its employees and require them to work in an environmentally responsible manner.
- Train, educate and inform its employees about environmental issues that may affect their work.
- Promote sustainability through the practice of reuse, recycle, refurbish and reduce waste.
- Avoid or reduce use of hazardous materials and products, seek substitutions when feasible, and take all reasonable steps to protect human health and the environment when such materials must be used, stored and disposed of.
- Operate by the highest standards possible to ensure protection of the environment while avoiding unplanned events (spills).
- Develop and maintain appropriate emergency and spill response capabilities.
- Train all employees in best practices for health and safety.
- Provide necessary Personal Protective Equipment (PPE) and instruction for its use and care.
- Develop and enforce safety and health rules, requiring that employees comply with these rules as a condition of employment.
- Investigate every incident, promptly and thoroughly, to determine its cause, and whenever possible, put measures in place to ensure against recurrence.
- Strive to continually improve environmental performance by periodically reviewing and updating EHS policy.

3.1 Roles and Responsibilities

The following section outlines the management structure, roles and responsibilities of personnel, for the implementation of Grieg NL's EHS policy for the construction phase of the RAS Hatchery.

Grieg NL General Manager: Primary person responsible for overall development of the RAS Hatchery, including environmental issues. Specific environmental responsibilities include:

- Ensuring environmental considerations are a part of the Project decision making process.
- Ensuring adequate plans and resources are in place to achieve environmental commitments to minimize environmental effects.
- Reviewing incident reports as they are submitted and ensuring the proper course of action is taken to manage unexpected environmental conditions or events.

EHS Project Consultant: Safety person responsible for Project construction. Will work with the team, report to the Grieg NL General Manager and be responsible for:

- Reviewing contractor documents.
- Overview of work being performed by contractors.
- Liaising with regulatory agencies on matters of EHS.
- Identifying any additional permitting requirements and submitting applications on behalf of the Contractor in a timely manner.

Owner Representative: Responsible for overseeing Project construction based on site. Reports to the Grieg NL General Manager and is responsible for:

- Ensuring compliance with relevant regulations, authorizations, permits and protocols.
- Ensuring documentation is submitted for compliance with Grieg NL policies.
- Coordinating with contractors and owners.
- Reviewing contractor documents.
- Conducting an overview of work being performed by contractors.

Grieg NL EHS Advisor: Primary Grieg NL employee responsible for overall environment, health and safety. Reports to the Grieg NL Production Manager and is responsible for:

- Performing orientations for new people on site (both visitors and workers).
- Providing environmental orientation to new employees.
- Providing awareness training on an as-needed basis.
- Ensuring that equipment is installed correctly/safely.
- Identifying potential environmental hazards.
- Determining ways of reducing EHS risks.
- Liaising with relevant authorities and contractors.
- Keeping up to date and ensuring compliance with current EHS legislation.

Contractor Project Managers: Responsible for specific scopes of work and ensuring the compliance of this specific scope. Report to the Owner Representative and are responsible for:

- Ensuring adequate resources are in place to achieve environmental commitments outlined in the contract, EPP, and any applicable permits and authorizations.
- Reviewing incident reports related to their specific work scope and employees as they are submitted and ensuring the proper management/resolution course of action is taken.
- Ensuring their scope does not impede or alter the scope or responsibilities of another contractor.

Contractor EHS Coordinator(s): Responsible for:

- Monitoring Project work to ensure that all provisions of the EPP, government approvals/authorizations and client/owner expectations are adhered to.
- Identifying any scope-specific permits not already obtained and working with the Owner Representative to ensure applications and approvals are timely.

3.2 Sustainability Policy

A key component of the Grieg NL EHS system is its sustainability policy, which is overviewed here and promoted throughout the EPP. Ultimately, Grieg NL's vision is to provide Placentia Bay Atlantic salmon for the world. Achieving this vision in a sustainable manner will be met through the company's commitment to the following principles: leadership, transparency, integrity, continuous improvement, inclusivity, and stewardship.

3.2.1 Priorities

Grieg NL's goal is the sustainable production of Atlantic salmon in the waters of Placentia Bay. Based on the expectations of Grieg NL and its stakeholders, the following priorities have been identified as key elements that are important for Grieg NL's achievements, profitability and survival with a focus on local and global sustainability:

- Fish health and welfare;
- Sea lice control;
- Fish escape control;
- Minimal emissions;
- Minimal interactions with wildlife; and
- Climate change.

3.2.2 Commitment and Scope

The sustainability policy will apply to all operations under Grieg NL. Grieg NL will utilize third-party service companies for many aspects of its operations and acknowledge that although Grieg NL cannot control the decisions of these parties, it commits to educate them of its policy. These third-party service providers will be encouraged to align their operating procedures with Grieg NL policy objectives. Grieg NL's priorities and any relevant decisions will be compliant with local, provincial and federal laws and regulations. Grieg NL will strive to exceed legal requirements with regard to sustainability, in order to be innovative and to demonstrate sustainability leadership.

3.2.3 Objectives

Grieg NL commits to:

- Focus on a safe and environmentally friendly food chain that produces quality products for consumers.
 - Strive to improve the feed conversion ratio (FCR) to a 1:1 ratio combined with optimization of fish products using the processing discards for human and other pharmaceutical or nutraceutical products.
- Balance profitable growth and innovation with environmental sustainability by using innovative technology and enhanced data collection to improve ecosystem understanding and sustainability decision-making.
 - Utilizing a RAS that requires minimal water consumption during smolt production.
 - Target to utilize fish feed that is produced using protein not designated for human consumption.
- Balance sustainable aquaculture and productive seas to maintain fish health and welfare, while also protecting the shared natural resources of the sea.
 - Utilizing sterile triploid all-female Atlantic salmon for all production in Placentia Bay.
- Providing a work environment that will attract and retain employees with a focus on health and safety, diversity, equity and integrity in the workplace.
 - Direct employment approaching 150 people in the Province upon reaching steady-state production.
- Local value creation, not only by hiring local residents, supporting local industries and utilizing third-party service contractors, but also contributing to the local communities by volunteering and donating resources.
- Publishing an annual Sustainability Report reviewing progress on achieving its goals that will be available to stakeholders and the public.

3.3 Development and Implementation of the EPP

The EPP is an essential component of Grieg NL's EHS system and is intended to ensure that all Project personnel abide by appropriate environmental protection actions, encompassing all Project phases for the RAS Hatchery. As noted earlier, this is a living document that will be revised as necessary based on review and approval of received suggestions, and to meet the requirements of reviewers and environmental approvals. EPP documents are typically revised as needed to reflect site- and/or task-specific activities as they relate to environmental protection measures and are structured to allow for revisions as Project activities progress. Separate EPP documents will be prepared for operation and decommissioning of the RAS Hatchery.

3.3.1 General Practices and Training

Grieg NL recognizes that communication and training are key to ensuring that Project activities with the potential to create a negative environmental effect are identified, and that preventative and/or mitigation measures are implemented. All Grieg NL employees, contractors, and subcontractors will undergo

employee orientation, which includes a review of environmental concerns and procedures. Additionally, multiple mechanisms are in place to ensure that the EPP contents are communicated to employees throughout the Project. A summary of these general practices is provided below.

3.3.1.1 Employee Orientation

Grieg NL recognizes the importance of EHS and is committed to ensuring a safe work environment for its employees, contractors and subcontractors, while also recognizing the importance of procedures and practices that will protect the environment. Grieg NL considers good husbandry and a strong focus on environmental protection essential during all Project phases and will emphasize this message to all new employees as part of their training and environmental orientation, and within Grieg NL's ongoing EHS management system. Grieg NL will ensure that all Project personnel, including contractors and subcontractors, are prepared and capable of completing their jobs competently and responsibly.

Grieg NL will maintain records of all environmental training and orientation sessions, including a description of the presented material, session dates and attendance. All Grieg NL personnel will receive orientation by a supervisor with awareness training. As well, on-going training will be provided on an as-needed basis.

All Project personnel working on site are required to participate in a site-specific Project and environmental orientation upon commencement of their employment and periodically thereafter as needed. This orientation will increase awareness of the Grieg NL EPP including the environmental protections relative to site-specific work activities, regulatory requirements, emergency preparedness and spill response capabilities, as well as client/contractor expectations for individual personnel roles and responsibilities.

Environmental orientation will include the following:

- Details on Grieg NL's EHS management system, EHS policy and obligations under the EPP.
- A presentation on environmental protection procedures to be applied to all work activities.
- Procedures for spill response and environmental emergencies.
- Personnel roles and responsibilities, including emergency preparedness.
- Description of tasks and activities, including any relevant activities that could involve environmental concerns.
- Instruction on specific procedures for environmental protection, including prevention, mitigation measures and documentation.
- The importance of enforcement and compliance with the EPP.

3.3.1.2 Construction Phase

During construction of the RAS Hatchery, Grieg NL has identified the following general mechanisms for dissemination of and conformance to the EPP:

- Contract documents will include a copy of the EPP for all bidders with a control copy of the EPP being issued to the successful bidder.
- Contractors will be requested to provide written confirmation that they will meet to requirements of the EPP.
- Contractors will be requested to review the specific scope for any known and potential issues that may be associated with their execution and methodology for the Project tasks.
- Where appropriate, contractors may be required to provide activity-specific EPPs at least seven days in advance of the initiation of the subject activity. This approach allows the EPP to be subdivided into smaller and more manageable and relevant documents. Submitting an EPP specific to a task, such as clearing and grubbing, closer to the point of execution optimizes complete understanding of task-specific EPP details and ensures the construction team remains focused on specific phase tasks and the EPP.
- Orientation sessions, including *New Employee*, *Project* and *Site Orientation*, will each include an “Environmental Orientation” component (see above) designed to inform employees of Project expectations with respect to individual performance on environmental issues.
 - Orientation sessions shall be provided to all employees by the EHS Advisor prior to work commencement. Hard copy records of these sessions shall be maintained on site in employee folders, along with electronic copies at the site office.
 - Site-specific issues will be covered, possibly including Species at Risk, Birds and Nests and Soils Management, among others.
- Environmental Awareness Training is Project-specific and is intended to highlight Project environmental sensitivities in appropriate detail relative to the various levels of Project involvement. A stand-alone session may be offered if required during the Project by the contractor EHS coordinator; however, environmental topics should also be embedded into daily toolbox talks, EHS meetings, progress meetings, work planning sessions, and the like. Such sessions will need to include such topics as spill prevention, incident reporting, fuelling, tank monitoring, wildlife encounters and waste management.
- *Mass EHS Meeting*: The Contractor Project Manager shall conduct a Mass EHS Meeting on a regular basis (interval to be Project Activity-specific) with staff and contractor/subcontractor representatives. The minutes will be recorded in a format suitable to the meeting or as prescribed by Project document control.
- *Weekly EHS Meetings*: These meetings shall be conducted by the immediate supervisor and periodically attended by a member of management. The minutes shall be recorded, and the attendees will sign to verify their attendance.
- *Daily Task/Toolbox Safety Meetings*: At the start of each day and the start of each new job, the supervisor shall conduct meetings relevant to the task(s) to be undertaken. The information conveyed to the crew shall include the task plan and precautions that should be taken. Meeting topics shall include: hazards (including environmental), permit reviews, site conditions, and special hazards/precautions.

3.3.1.3 Overall Operations

- *Annual Environmental Performance Review:* In order to continually improve on its performance, Grieg NL will hold annual environmental performance review meetings. Site managers, along with the Production Manager and/or General Manager, will review environmental performance and compliance at the RAS Hatchery construction site. These meetings will provide an opportunity to ensure EPP procedures as well as permitting and governmental policies are consistent.
- *Monthly/As-needed Toolbox Meetings:* The Production Manager will meet monthly or as required with site managers from the RAS Hatchery. These informal meetings will address, among other topics, Health, Safety, Environment and Security issues. These monthly meetings will provide an avenue to discuss any concerns or recent incidents.

4.0 Environmental Protection Procedures

Environmental protection procedures are provided here for each of the primary construction activities associated with the RAS Hatchery. As the work proceeds, these procedures may be modified or new procedures implemented, to account for new Project activities, site conditions, changes in engineering design or construction methods, and as a result of lessons learned during activities.

For Project activities at the RAS Hatchery, Grieg NL's civil contractor, Pennecon, as well as subcontractors will have Standard Operating Procedures (SOPs) in place, which provide step-by-step instructions for conducting various construction activities. These SOPs will also contain steps to protect the environment and which are in line with the procedures provided below. Employees, contractors and suppliers are required to follow and adhere to all environmental protection procedures.

As noted previously, the site for the RAS Hatchery has already been mostly cleared and grubbed. Some grubbing and leveling of the site is still required, including the removal of unsuitable material, common excavation, drilling and blasting.

4.1 Clearing, Grubbing and Removal of Related Debris

Environmental Concern

Environmental concerns include loss of habitat and potential effects of erosion and sedimentation on watercourses and the marine environment.

Environmental Protection Procedures

Though the majority of clearing and grubbing has been completed for the project, the following measures shall be implemented, as required:

1. Contractors shall adhere to current Industry Best Practices for managing erosion and sedimentation in accordance with municipal, provincial and federal regulations.
2. Clearing shall comply with the requirements of all applicable permits, including a Commercial Cutting Permit and an Operating Permit.
3. Where possible, timber shall be felled inward toward the work area to avoid damaging any standing trees within the immediate work area.
4. Clearing activities occurring during bird nesting season shall require a nest survey. No activities shall be permitted to disturb or scare away birds or wildlife.
5. Grubbing shall be contained to areas necessary for project development.
6. Grubbed material shall not be pushed into areas that are to be left undisturbed.
7. Grubbed material shall be stockpiled in a designated area.
8. A minimum 15 m buffer zone shall be maintained between grubbed areas and any adjacent watercourse, including Jones Brook and Placentia Bay.
9. Rock berms, silt fencing, and hay bales shall be used to control run-off and potential sedimentation of waterways, particularly in susceptible areas (i.e., steep slopes).
10. Sediment control structures shall be monitored, maintained, and repaired on a scheduled basis (minimum weekly) and before predicted/after actual rainfall events >25 mm.

11. Additional silt fencing and hay bales shall be stored on site and available if needed.
12. Additional measures to rehabilitate and stabilize construction sites include covering sloped areas with rip rap (clean blasted rock) or hydro seed as appropriate shall be undertaken.
13. Exposed soil and/or material stockpiles shall be placed such that the stockpiles are aligned relative to prevailing winds and dust control/suppression is implemented as required.
14. Any areas to be restored after construction is complete shall be covered with topsoil and sodded or hydro seeded.
15. There shall be no disruption of shoreline areas or requirement to construct access roads.

4.2 Storage, Transportation, Transfer, Handling and Disposal of Fuel and Other Hazardous Substances

Environmental Concern

During construction, some substances will be used which are or may be classified as hazardous including petroleum, oil and lubricants; chlorinated and non-chlorinated solvents (e.g., cleaner-degreasers); waste petroleum products (e.g., used engine/motor oil); glycol (e.g., antifreeze), paints, epoxies, concrete additives, and explosives. The primary concern regarding the use and storage of fuel or other hazardous materials is an uncontrolled or accidental release into the environment and subsequent negative effects on terrestrial and aquatic habitat and species, soil, surface and groundwater quality and human health and safety.

Environmental Protection Procedures

The following procedures will be implemented to reduce the likelihood of accidental release of hazardous substances that may result in negative environmental effects:

1. Procedures for the handling of fuels and other hazardous materials as well as contingency plans for spills will be present in hard copy at receiving, storage, transfer and disposal areas.
2. Contractors will be required to submit a detailed EPP prior to the start of construction including Material Safety Data Sheets (MSDS) of all hazardous products.
3. Any soil contaminated by small leaks of fuel, oil or grease from equipment shall be cleaned up and disposed of in accordance with the applicable regulations, under the provincial *Environmental Protection Act* (2006) and Used Oil Control Regulation (82/02). The Used Oil Control Regulation (82/02) will be used as a guideline to the DMAE requirements for such disposal.
4. Smoking shall be permitted in designated areas only. Designated smoking areas shall not be within 10 m of fuel or hazardous material storage areas.
5. A complete inventory of the hazardous materials on the job site shall be maintained according to the Workplace Hazardous Materials Information System (WHMIS) Regulations and will be made available to regulatory agencies upon request or in case of any emergency.
6. All subcontractors and Grieg NL employees shall be required to observe strict compliance with the requirements of WHMIS regarding employee training, use, handling, storage, and disposal of hazardous materials and regarding labeling and provision of MSDS, as required by WHMIS legislation.

7. Tanks shall be located in areas where spills, should they occur, shall not flow to watercourses, water bodies, ditches or the marine environment.
8. If fuel tanks are required to be stored on site during construction, these shall be located on concrete pads surrounded by a containment barrier to prevent spills to the environment as described in section 27 – Construction and Installation Standards of *Storage and Handling of Gasoline and Associated Products Regulations, 2003*. Tanks for fuels and other hazardous materials shall be self-dyked or be positioned over an impervious mat, surrounded by an impervious dyke of sufficient height, more specifically:
 - a. Where a dyked area contains only one storage tank, the dyked area will retain not less than 110% of the capacity of the tank; and
 - b. Where a dyked area contains more than one storage tank, the dyked area will retain not less than 110% of the capacity of the largest tank or 100% of the capacity of the largest tank plus 10% of the aggregate capacity of all the other tanks, whichever is greater.
9. All storage facilities shall be located away from construction activities, provided with secondary containment, and inspected on a regular basis in compliance with all government laws and regulations.
10. As per the required operations permit and relevant legislation for drilling and blasting during the construction phase, explosives shall not be stored or remain on site overnight.
11. Oils, grease, gasoline, diesel or other fuels or any material deemed to be hazardous shall be stored at least 100 m from any watercourse or the ocean.
12. Fuel and other hazardous materials storage areas and non-portable transfer lines shall be clearly marked or barricaded to protect against damage by moving vehicles. The markers will be visible under all weather conditions. Barriers shall be constructed in compliance with the provincial Storage and Handling of Gasoline and Associated Product Regulations (58/03).
13. Hazardous materials shall be properly labelled and stored in an appropriate storage cabinet, cupboard or designated area.
14. Containers containing hazardous materials shall be appropriate for the material being stored and shall always be kept sealed when not in use.
15. The transportation, use and storage of fuel and other hazardous materials is regulated by The Storage and Handling of Gasoline and Associated Products (GAP) Regulations and Amendments, *Transportation of Dangerous Goods Act* (1992) and *Dangerous Goods Transportation Act* (2006). Employees and contractors shall follow all required regulatory policies and procedures.
16. Diesel fuel tanks for the hatchery backup generator system will be installed with guidance from Service NL to register these tanks and receive instructions from an Environmental Protection Officer as to which contingency plan documents are required.
17. Hazardous Storage Areas shall be equipped with appropriate firefighting equipment.
18. All Occupation Health and Safety regulations regarding the use, storage and training on all classes of fire extinguishers that may be required shall be followed.
19. Waste oils, lubricants and other used oil shall be retained in a tank or closed container and shall be disposed of regularly under contract with a licensed used oil collector in accordance with the Used Oil Control Regulations (82/02).
20. Greasy or oily rags or other materials at risk of spontaneous combustion shall be deposited and stored in appropriate receptacles. This material shall be removed from the work site on a regular basis and shall be disposed of in an approved existing waste disposal facility.

Removal of these materials from the job site is regulated under the *Transportation of Dangerous Goods Act*.

21. All hazardous materials shall be handled according to the provincial *Environmental Protection Act* (2006) and disposed of in accordance with government laws and regulations at an approved off-site hazardous waste disposal facility.
22. Regular inspections of hydraulic and fuel systems on machinery shall be performed, and all leaks shall be repaired immediately upon detection. Worn or damaged hoses, seals and fittings shall be promptly repaired or replaced.
23. Fuelling, routine maintenance activities, and lubrication of vehicles and mobile equipment shall be performed in designated and approved locations. Fuelling and lubrication of equipment shall occur in such a manner as to minimize the possibility of contamination to soil or water. All activities shall be performed with appropriate spill protection measures.
24. Fuelling or servicing of mobile equipment shall not be allowed within 30 m of water bodies, drainage systems or ecologically sensitive areas. For equipment of limited mobility where the 30 m buffer zone cannot be practically achieved, adequate spill containment shall be provided during the fueling and servicing operations.
25. All deliveries of fuel shall be in conventional fuel delivery trucks that are operated by licensed distributors.
26. When fuelling equipment, operators shall:
 - a. Be in attendance for the duration of the operation;
 - b. Use leak-free containers and reinforced rip and puncture-proof hoses and nozzles;
 - c. Use hoses that have a design pressure rating of at least 150% of the maximum head of the system;
 - d. Lock out all tank nozzle valves except the valve currently in use;
 - e. Seal all storage container outlets except the outlet currently in use; and
 - f. Ensure drip pans, and other precautionary measures as required, are in place prior to the start of refueling activities.
27. Fuel unloading facilities shall be equipped with drip pans to collect hose drainage and drips. Hoses or pipes used for fuel transfer shall be equipped with properly functioning and approved check valves, spaced to prevent backflow of fuel in the case of failures.
28. All necessary precautions shall be implemented to prevent the spillage, misplacement, and loss of fuels and other hazardous materials used during the construction phase.
29. A fuel and other hazardous materials spill contingency plan, and appropriate emergency spill equipment, shall be in place on site.
30. All spills of fuel and hazardous materials shall be reported immediately to the EHS Advisor. Any spill of any volume to the marine environment or spills of 70 L or more on land shall be reported immediately in accordance with provincial regulation.
31. Any spill on land regardless of size that may enter a waterbody frequented by fish shall be reported immediately to Canadian Coast Guard Environmental Emergencies: (709) 772-2083 or 1-800-563-9089, as required by the *Fisheries Act* and Section 201 of *Canadian Environmental Protection Act (CEPA)*. All such spills shall also be reported immediately to the EHS Advisor and Production Manager.
32. Spill kits shall be maintained at the construction site for quick response purposes.
33. All selected response equipment shall be selected for its suitability/acceptability for deployment.

34. All employees and contractors shall be made aware of the Spill Management Plan and their role.
35. All petroleum-based products used in the facility during construction and operation including oils, fuels, and greases shall be reused when possible (e.g., waste oil can be collected and burned).
36. When possible, environmentally friendly options shall be used (e.g., food grade grease/oil).
37. Reduce the use of products such as paints and only paint areas as needed. Unused paint shall be recycled when possible or disposed of at an approved waste disposal area.

4.3 Blasting

Environmental Concern

Drilling and blasting are required to bring the site for the RAS Hatchery to specific grades/levels. Potential impacts include destruction of vegetation, noise disturbances to wildlife, and the potential effects on fish, aquatic animals, and residents in adjacent areas.

Environmental Protection Procedures

1. All blasting work shall be conducted in compliance with the appropriate permits and/or approvals and authorizations.
2. The handling, transportation, storage and use of explosives shall be conducted in compliance with all applicable laws, regulations, orders of the Newfoundland and Labrador Department of Government Services (NLDGS) and Newfoundland and Labrador Department of Natural Resources (NLDNR), and the *Dangerous Goods Transportation Act* (2006).
3. All personnel shall comply with site-approved safe blasting procedures.
4. Blasting activities shall be coordinated and scheduled to minimize the number of blasts required. In order to minimize the seismic effect, blasting patterns and procedures shall be used to reduce the shock wave and noise.
5. Blasting shall not occur in the vicinity of fuel storage facilities.
6. Use of explosives shall be restricted to authorized personnel who have been trained in their use. Licensed blasters shall undertake blasting.
7. Explosives and auxiliary materials shall be stored as stipulated in relevant legislation, in compliance with all permits.
8. Explosives shall be used in a manner that will minimize damage or defacement of landscape features, trees and other surrounding objects by controlling, through the best methods possible (including time-delay blast cycles), the scatter of blasted material beyond the limits of activity.
9. Pre-blast surveys shall be conducted for wildlife and, if wildlife is encountered in the area, the blast will be delayed until the wildlife is no longer present.
10. A blast site safety manual shall be required from the licensed contractor, a key aspect of which will include a blasting warning protocol (i.e., horns and/or sirens).
11. Blasting in close proximity to adjacent watercourses, including Jones Brook and Placentia Bay, shall follow the *Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters* (Wright and Hopky 1998; Appendix A).

4.4 Concrete Handling and Placing

Environmental Concern

Typical of industrial construction, large quantities of concrete shall be utilized during the construction phase of the RAS Hatchery. The production of concrete involves the use of cement, concrete additives, reaction agents and aggregates. Cement is highly alkaline and wash water (e.g., from spoiled concrete or cleaning mixers and mixer trucks) will have a high pH and will contain additives and agents, some of which are toxic to terrestrial and aquatic species. Of concern is the potential of fresh concrete or concrete products to affect the environment, such as released wash water increasing pH or chemical levels in local water sources to potentially toxic levels.

Environmental Protection Procedures

Grieg NL shall implement the following environmental protection procedures for the use of fresh concrete near bodies of water:

1. The batch plant providing concrete (i.e., a third-party provider) shall comply with the NL Environmental Code of Practice for Concrete Batch Plant (Ready Mix Plant) Operations and Rock Washing Operations, 1992, as well as all applicable authorizations and guidelines.
2. A third-party inspection will be utilized to ensure the contracted batch plant is performing to all required codes and standards.
3. Concrete delivery trucks or chutes shall not be washed within 100 m of any watercourse or waterbody.
4. When concrete is to be placed within 15 m of a waterbody, provisions of all required permits shall be followed. Under no circumstances shall fresh concrete come into contact with a waterbody before the concrete has cured.
5. Washwater from the cleaning of mixers, mixer trucks and concrete delivery systems shall be handled using the procedures outlined in Section 3.0 of the NL Environmental Code of Practice for Concrete Batch Plant and Rock Washing Operations. The following outlines important steps to take, however the code of practice shall be reviewed thoroughly:
 - a. All rinsing activities shall be carried out at the site of the concrete batch plant, except rinsing of the chute and concrete delivery systems;
 - b. The rinsing of the chute may be carried out at the delivery site, but care and caution shall be taken. It is permissible to rinse onto the ground or soil but under no circumstances into a pond or stream or onto a surface that leads directly to a water body, such as a storm sewer. A washout area shall be provided.
 - c. A qualified third-party responsible for reporting non-conformances to DMAE will be hired.
6. All necessary precautions shall be taken when handling related substances such as form coatings and concrete admixtures to prevent any spill or leakage of these substances.
7. All spills are to be captured and shall be handled as described in Section 4.1.2.
8. All spills over the minimum reporting volumes shall be reported to DMAE within the prescribed time frame.

4.5 Storage, Handling, and Disposal of Solid Waste

Environmental Concern

The release of solid waste is a concern to human health, drinking water quality, aquatic and terrestrial ecosystems.

Solid waste (e.g., domestic waste, paper, cardboard, wood, metals, etc.) will be generated during construction activities. These wastes, if not properly controlled and handled, will be unsightly and may cause human safety and health concerns. Uncontrolled waste may also attract wildlife leading to potential human-wildlife encounters.

Environmental Protection Procedures

1. The amount of waste generated and requiring disposal shall be minimized as much as possible.
2. All wastes shall be handled according to procedures in Grieg NL's Waste Management Plan and in compliance with all relevant regulations.
3. By using pre-fab buildings, only the necessary amount of materials required for building construction will be sent to the construction site, and there will be minimal waste associated with cutting materials or workmanship errors.
4. Fiber rebar (i.e., basalt fiber reinforced polymer) will be considered for use in concrete reinforcement to reduce steel waste with excess fiber rebar being chipped for compaction and disposal.
5. A refuse wood site shall be identified for local use for disposal of wood pallets and other excess wood materials.
6. Wood products shall be chipped for disposal whenever possible.
7. Scrap steel and plastic products such as piping will be retained by Grieg NL for use in facility repairs.
8. Where this is not practical due to materials being damaged or too small, steel products will be recycled through local companies.
9. Plastic products shall be recycled where possible with disposal only when no other option remains.
10. On site waste shall be disposed in accordance with the Burin Peninsula Waste Management Corporation (BPWMC).

4.6 Sewage Disposal

Environmental Concern

The release of untreated sewage may pose risks and/or concerns to human health, drinking water quality and marine and freshwater ecosystems.

Before the RAS Hatchery is constructed and the facility is tied into the existing BMS Blivet waste water treatment system in the Marystown Marine Industrial Park, temporary portable toilets may be on site, or

temporary office facilities may be constructed that tie into the Blivet system. This will be decided by contractors after contracts are awarded.

Environmental Protection Procedures

1. Until such time as the contractor can tie into the Blivet system, sewage shall be handled by temporary portable toilets or washcars located around the construction site and will comply with all health and safety regulations, the Department of Health guidelines, the *Environmental Protection Act* (2006), and Environmental Control Water and Sewage Regulations, 2003 (65/03).
2. Sewage waste shall be trucked off-site by a licensed waste management firm for treatment and disposal.

4.7 Vehicular Traffic

Environmental Concern

Lots within the Marystown Marine Industrial Park are currently serviced with a paved access road. There will be no construction of access roads. Vehicular traffic will be typical of industrial construction projects in the province during the construction phase of the RAS Hatchery. Proposed construction activities will be supported by vehicles ranging in size from light trucks to heavy equipment, all of which can result in direct physical disturbances that can impact air quality and terrestrial and aquatic environments.

Environmental Protection Procedures

1. No anticipated requirement for all-terrain vehicle (ATV); if requirement arises, the use of ATVs shall be restricted to designated roadways and/or areas to minimize ground disturbance.
2. Heavy equipment shall be minimized near waterbodies. Heavy equipment use shall be restricted from performing work in the nearby brook.
3. Reasonable speed limits shall be posted to reduce potential environmental impacts and vehicular accidents.
4. Inspection and maintenance of all project vehicles shall be performed on a daily/weekly schedule to ensure they are in good working order. Inspections and maintenance shall include but not limited to exhaust systems, mufflers and any other pollution control devices in order to ensure emissions remain within acceptable standards.
5. Construction vehicular traffic shall not travel outside designated work areas.
6. Public roads shall be inspected on a regular basis with the local road authority. Repairs and/or clean-up shall be discussed and agreed to with the local road authority.

4.8 Dust Control

Environmental Concern

Excessive dust may be generated during dry conditions, which may pose environmental concerns related to human health, terrestrial vegetation, and marine and freshwater environments.

Environmental Protection Procedures

In order to maintain appropriate air quality and prevent smothering or other undue environmental effects, the following procedures will be implemented, as appropriate:

1. Freshwater shall be used as the primary measure to control dust. Application will be via water truck with sprinkler.
2. If necessary, using other agents, such as calcium chloride shall be used to control dust in accordance with applicable guidelines. No petroleum-based products shall be used for dust control.
3. All dust control agents shall be stored away from water bodies.
4. Dust emissions shall be reduced to the greatest extent possible.
5. No dust control shall be applied if weather conditions indicate a potential for freezing and creating traffic hazards.
6. Local road authorities shall be consulted prior to applying dust control measures on public roads.
7. A vehicle/tire wash/wet area shall be provided to control dirt and dust on public roadways.
8. Weather forecasts/conditions shall be monitored to ensure adequate dust control measures are implemented.

4.9 Equipment Use and Maintenance

Environmental Concern

Environmental concerns associated with the operation and use of construction equipment include atmospheric emissions, noise, accidental spills and chronic leaks. Emissions, spills and direct physical disturbances as a result of equipment can adversely affect surrounding resources.

Environmental Protection Procedures

1. All Project-related equipment must be clean and in good working order when delivered for construction activities.
2. All efforts must be made to avoid the discharge of oils, fuels or other such compounds from equipment to the surrounding environment.
3. Equipment including generators and vehicles shall be inspected and serviced routinely for mechanical condition and to ensure there are no leaks that could result in spills of hazardous materials.
4. Equipment inspections and maintenance shall be conducted by qualified personnel.
5. Pipes, hoses and connections for equipment shall be inspected routinely for breaches or defects.
6. Leaks, breaks, or compromised hoses, pipes and connectors shall be repaired and reported immediately.
7. Spill kits shall be maintained on site. Each piece of equipment shall have a portable spill kit on board. In addition, drum spill kits shall be strategically located near working areas.

8. All deliveries of fuel shall be in conventional fuel delivery trucks that are operated by licensed distributors.
9. Records shall be maintained on file for all inspections and maintenance servicing.

4.10 Protection of Migratory Birds

Environmental Concern

Migratory birds, their eggs, nests, and young are protected under the *Migratory Birds Convention Act (MBCA)*. Migratory birds protected by the *MBCA* generally include all seabirds except cormorants and pelicans, all waterfowl, all shorebirds, and most landbirds (birds with principally terrestrial life cycles).

Under Section 6 of the *Migratory Birds Regulations (MBR)*, it is forbidden to disturb, destroy or take a nest or egg of a migratory bird or to be in possession of a live migratory bird, or its carcass, skin, nest or egg, except under authority of a permit. It is important to note that under the current MBR, no permits can be issued for the incidental take of migratory birds caused by development projects or other economic activities.

Furthermore, Section 5.1 of the *MBCA* describes prohibitions related to deposit of substances harmful to migratory birds:

5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.

(2) No person or vessel shall deposit a substance or permit a substance to be deposited in any place if the substance, in combination with one or more substances, results in a substance — in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area — that is harmful to migratory birds."

Environmental Protection Procedures

The following procedures shall be put into place to ensure that the Project does not pose a threat to migratory birds:

1. No one shall approach concentrations of seabirds, sea ducks or shorebirds that may occur at the construction site or adjacent to the site.
2. Care shall be taken to ensure that food scraps and other garbage are properly disposed of to avoid attraction of potential predators to migratory birds.
3. During the breeding bird season, visual monitoring for nesting activity within the construction area will be conducted.
4. No one shall disturb, move, or destroy migratory bird nests. If a nest or young birds are encountered, work will cease in the immediate area of the nest. Work shall not continue in the area until the nest is no longer occupied, otherwise the work plan shall be modified to avoid nest sites.
5. Personal pets shall not be brought to the construction site.

6. Buffers shall be established around known nests (species-specific); however, staff and crew shall be made aware of the possibility of undiscovered nests. When one or more of the indicators below are noted, notifications shall be made as appropriate. An active nest can be identified by:
 - a. the presence of birds or eggs in a nest;
 - b. adult birds carrying food or nesting materials to a specific location; or
 - c. adult birds defending territory, through singing, screeching or diving.
7. All precautions shall be taken to prevent fuel leaks from equipment. Staff and crew are aware that under the MBR, “no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds”.
8. While there is no expectation of nighttime activities, should that requirement change the following measures shall be implemented:
 - a. The use of solid-burning or slow pulsing warning lights at night shall be avoided;
 - b. Lighting for the safety of the employees shall be shielded to shine down and only to where it is needed, without compromising safety; and
 - c. The minimum number of lights possible shall be used, while still ensuring the safety of crews working at night.

5.0 Contingency Plans

Contingency plans to address incidents and unplanned situations that may occur during the construction of the RAS Hatchery have been developed and will be modified as required. Grieg NL has developed a separate Emergency Response Plan that details procedures for personnel health and safety and response to accidents, malfunctions, and emergencies. Grieg NL has also developed a Spill Management Plan. These documents are the first point of reference for emergency responders in case of an emergency on site. Information provided in this section is meant to support the Emergency Response and Spill Management Plans and be available as an additional reference.

The following contingency plans have been developed to address accidental and unplanned situations that may occur during the construction phase at the RAS Hatchery:

- Fuel and Hazardous Materials Spills
- Forest Fires
- Wildlife Encounters
- Extreme Weather Events
- Discovery of Historic Resources
- Discovery of a Species At Risk

Notwithstanding these contingency plans, Grieg NL supports preventative measures as the first line of defence against the possibility of incidents.

5.1 Fuel or Hazardous Material Spills

The civil contractor, Pennecon in consultation with Grieg NL will lead and coordinate any field response to environmental incidents related to their activities. During construction of the RAS Hatchery, it is anticipated that spilled material will be primarily fuel, lube, and hydraulic fluid originating from equipment wear and tear and/or malfunction. Therefore, in the event of a spill, procedures for responding to hydrocarbon spills outlined herein, shall apply:

1. Assess the situation (Safety First). Personnel shall not approach the spill area without appropriate PPE.
2. Identify priorities while considering the threat to people, property, and the environment.
3. Initiate the appropriate response actions:
 - The individual who discovers the leak or spill shall make a reasonable attempt to immediately stop the leakage and contain the flow, where safe to do so.
 - Contact emergency personnel and request additional support if necessary.
 - Reporting: spill location, type of product, estimated volume and terrain condition at the spill site will be determined and reported immediately to Grieg NL's EHS Advisor for further reporting to authorities, as appropriate.
 - Initiate the containment and recovery of any free product and/or contaminated material.

4. Dispose of all waste material in the appropriate manner.
5. Restore the site to the satisfaction of the Project representative or governing regulatory body.
6. Document and investigate as required.

Reportable spills include:

- A spill or leak greater than 70 L on land;
- A spill or leak on land, regardless of quantity, that has the potential to contaminate nearby property or enter a water body or sewer;
- Spills or leaks from storage tanks; or
- A spill or leak in the water, regardless of quantity.

Spills meeting the above criteria shall be reported immediately to regulatory authorities via the **Environmental Emergency Report Line at (709) 772-2083 or 1-800-563-9089**.

In reaching decisions on containment and clean-up procedures, the following criteria will be applied:

- Minimize danger to persons;
- Minimize pollution of water courses;
- Minimize area affected by spill; and
- Minimize the degree of disturbance to the area and watercourses during cleanup.

Grieg NL and its subcontractors will take all necessary precautions to prevent a reoccurrence of the incident and the EHS Advisor shall prepare a written report as required.

All fuel-powered equipment shall contain appropriately-sized spill kits (23 L). In addition, 45 gallon drum spill kits shall be strategically placed throughout the site and moved as required. In addition, a sea-can clearly marked as "Spill Response Equipment" shall be located in the lay down area. The contents of spill kits shall be routinely inspected and supplies replenished as necessary.

In the event of fuel or hazardous material spills, Project personnel are also to refer to Grieg NL's Spill Management Plan: Land and Water, and emergency contact phone numbers (first page [i]) and section 4.0, *Emergency Response*, of Grieg NL's Emergency Response Plan.

5.2 Forest Fires

A fire at the construction site has the potential to spread to the surrounding area. Conversely, a forest fire or fire at another facility within the Marystown Marine Industrial Park could spread to the RAS Hatchery site. Terrestrial fires could result in habitat alteration or loss and/or mortality of wildlife. Fire fighting chemicals or spilled materials associated with fires could enter freshwater or marine environments, potentially negatively affecting habitat and biota, particularly if permitted to disperse and persist. Fires may also adversely affect air quality and pose risks to human health and safety.

Grieg NL shall take all necessary precautions to prevent fire hazards when working at the site, including, but not limited to, the following:

- Adhering to appropriate permits, including operating permits.
- Storing, handling and disposing of flammable materials and waste appropriately and in accordance with appropriate regulations.
- Smoking in designated areas only.
- Ensuring all fire extinguishers are marked and easily accessible to anyone who may need to use them.

If a fire is encountered, the following protocol shall be followed:

- The individual who discovers the fire shall raise the alarm to alert all on-site personnel.
- Immediately stopping work and controlling all sources of further ignition.
- Personnel trained in fire-fighting and the use of appropriate equipment shall take immediate steps to contain or extinguish the fire.
- Fires shall be reported immediately to the EHS Advisor, Marystown Fire Department, and the nearest Forest Management Unit office for further reporting to the local authorities. The following information shall be provided:
 - name and telephone number
 - time of detection
 - size of fire
 - location of fire
 - weather conditions (rain, sun, wind direction and speed, etc.)
- Follow the appropriate route to the construction site muster station.

Personnel are also referred to Section 7.1, *Fire Emergency Plan (Land-based RAS Hatchery)* of Grieg NL's Emergency Response Plan for fire prevention and response actions.

5.3 Wildlife Encounters

Wildlife encounters pose a potential risk for stress or injury to both the wildlife and site personnel. To reduce the risk to both wildlife and site personnel, the following measures will be implemented:

- Hunting, trapping or fishing by Project personnel is not permitted on site.
- Site and working areas shall be kept clean of food scraps and garbage.
- Wildlife protected disposal containers will be used and will be regularly emptied and transferred to the local landfill.
- No personal pets, domestic or wild, will be allowed on the site.

In addition to the above protection measures, the following protocol will be followed in the event of a wildlife encounter:

- Workers shall not attempt to chase, catch, divert, follow or otherwise harass wildlife by vehicle or on foot.
- Equipment and vehicles shall yield the right-of-way to wildlife.
- Wildlife sightings or encounters shall be reported to the EHS Advisor. All actions in response to nuisance animals shall be the responsibility of Grieg NL.
- If the nest of any bird is encountered during construction activities, work around the nest will be immediately stopped and the EHS Advisor notified.
- Any incidents that result in the displacement or killing of wildlife shall be reported to EHS Advisor, complete with details on the incident and the names (and contact information) of the persons involved, for reporting as required.

5.4 Extreme Weather Events

Extreme weather events, such as severe winter storms, hurricanes or post-tropical storms, can bring strong winds, heavy snow, rain or freezing rain, flooding, high waves or ice. Such events can disrupt unsecured construction materials or equipment, or damage buildings. In anticipation of an extreme weather event, precautionary measures to prevent negative impacts to the environment include:

- Securing loose materials, coverings and containers, including waste containers.
- If applicable, appropriately collecting and disposing/storing product from equipment drip pans or tank dyke pads and ensuring drainage equipment is in good condition and clear of debris, snow or ice.
- Checking that sedimentation control structures are secure and in good working order, and capable of handling anticipated flow.

Immediately following an extreme weather event, all on-site environmental protective measures will be checked. Any required repairs will be completed as soon as conditions allow, before any work occurs utilizing the equipment to be repaired/replaced.

5.5 Discovery of Historic Resources

Historic resource material that is disturbed, destroyed, or improperly removed from the construction site represents a cultural loss of information and history that could otherwise be handled and interpreted in an appropriate manner.

In the unlikely event evidence of an archaeological item/site is discovered during construction activities, the following measures will be taken:

- All work in the immediate area of the discovery shall be stopped until authorized personnel (EHS Advisor) consult with the Provincial Archaeologist and permission has been received to resume work.
- Report the find immediately to the EHS Advisor.
- Mark the site's visible boundaries. Personnel will not move or remove any artifacts or associated material unless advised to do so by the Provincial Archaeology Office.
- Grieg NL will report the find with the following information to the Provincial Archaeology Office, Culture and Heritage Division, Department of Tourism, Culture, and Recreation, St. John's, and comply with the instruction provided:
 - nature of the find;
 - precise descriptive and map location and the time of the find;
 - nature of the activity resulting in the find;
 - identity of the person(s) making the find;
 - present location of the material and any protective measures initiated for the material and the site; and,
 - any extenuating circumstances.

5.6 Discovery of a Species at Risk

The following species at risk (as listed on Schedule 1 of the *Species at Risk Act [SARA]*) may occur within the RAS Hatchery site: Red Crossbill (Endangered), Olive-sided Flycatcher (Threatened), Peregrine Falcon (Special Concern), and Rusty Blackbird (Special Concern). Though unlikely to be found within the RAS Hatchery site, which has already been mostly cleared, these species may occur within the general area.

The construction of the Project may affect Species at Risk and their habitat. Since these species are extremely sensitive to habitat degradation the following measures will be put into place to ensure that the Project does not pose a threat to their population's survival:

- All personnel working on site will adhere to all stipulations set out in the *SARA*, and will be informed that it is illegal to kill, harass, capture or harm any species listed under it; and
- If a Species at Risk, as listed above or otherwise, is discovered, all work in proximity to the location will cease and it will be reported to the EHS Advisor who will then contact ECCC-CWS for further action.

6.0 Legislation, Permits and Authorizations

Grieg NL has identified the various legislation, permits and authorizations to which the company subscribes related to the Project's environmental aspects—see below.

6.1 Legislation

Relevant legislation for the construction of the RAS Hatchery component of the Project includes the following:

- *Transportation of Dangerous Goods Act*
- *Migratory Birds Convention Act*
- *Aquaculture Act*
- *Lands Act*
- *Environmental Protection Act*
- *Urban and Rural Planning Act*
- *Water Resources Act*
- *Occupational Health and Safety Act*
- *Buildings Accessibility Act*
- *Public Safety Act*
- *Fire Prevention Act*
- *Species at Risk Act*
- Aquaculture Activities Regulations (AAR)
- Town of Marystown Development Regulations

6.2 Permits and Authorizations

In Canada, the aquaculture industry is regulated and managed by both the federal and provincial governments. Grieg NL is required to adhere to these regulations. The Project must also comply with provincial and municipal regulations related to the construction of the RAS Hatchery. A list of required key permits and approvals is provided in Table 6.1. Grieg NL's civil contractor, Pennecon in a joint-effort with Grieg NL, will house and manage permits and authorizations in dedicated software (i.e., *Intelix*, business intelligence software).

Table 6.1. Anticipated federal, provincial and municipal approvals and permits for the construction phase of the RAS Hatchery.

Permit, License or Regulatory Approval	Activity Requiring Approval	Legislation	Regulatory Agency Responsible	Status
Government of Canada				
As per Transport Canada Regulations ^a	Transportation of explosives	<i>Transportation of Dangerous Goods Act</i>	Transport Canada	In progress
Migratory Bird Permit	Any activities that could cause mortality, disturbance or require relocation of migratory birds	<i>Migratory Birds Convention Act</i>	ECCC-CWS	To be determined
Government of Newfoundland and Labrador				
Aquaculture Licence	Any aquaculture activities	<i>Aquaculture Act</i>	DFLR	In progress
Application for Crown Land Title	Leasing of land for the land-based facility	<i>Lands Act</i>	DFLR	Completed
Certificate of Approval for Construction of Commercial Plant	Construction of the land-based facility	<i>Environmental Protection Act</i>	DFLR	In progress
Development Certificate	Construction and operation of the land-based facility	<i>Urban and Rural Planning Act</i>	DFLR	In progress
Application for Permit Water and Sewage Works	Obtaining/discharging water for use in construction and operation of the land-based facility	<i>Water Resources Act</i>	DFLR	In progress
Permit for Flammable and Combustible Liquid Storage	Storage of flammable and combustible liquids	<i>Environmental Protection Act</i>	DFLR	In progress
As per Occupational Health and Safety Regulations ^a	Blasting at hatchery site	<i>Occupational Health and Safety Act</i>	Service NL	In progress
Notification to Minister of OH&S of start of construction for any project over 30 days duration	Construction of the land-based facility, including blasting	<i>Occupational Health and Safety Act</i>	Service NL	Obtained
Building Accessibility Exemption Registration	Construction of the land-based facility	<i>Buildings Accessibility Act</i>	Service NL	In progress
Fire Commissioners Approval under the National Building / Fire / Life Safety Code	Construction of any buildings		Service NL	In progress
Used Oil Storage Tank System	Storage and Handling of Petroleum Products	<i>Environmental Protection Act and Fire Prevention Act</i>	Service NL	In progress
Electrical Permit	All electrical wiring and infrastructure installation	<i>Public Safety Act</i>	Service NL	To be determined
Certificate of Plant Registration for Power, Heat, Refrigeration, Compressed Gas or Combined Plant	Various project related activities		Service NL	To be determined
Municipal Government				
Construction Permit	Permits must be in place for any development of the land-based facility	Town of Marystown Development Regulations	Marystown Municipal Government	In progress
Compliance with Marystown Municipal Plan	Permits must be in place for any development of the land-based facility	Town of Marystown Development Regulations	Marystown Municipal Government	In progress

Note: ^a The contractor conducting the blasting will be responsible for ensuring these regulations are followed.

7.0 Contact List

Contact lists will be posted in central, visible locations at the RAS Hatchery construction site. The lists will be kept up to date, and all contacts on the lists will be made aware of their expected role(s) during routine and/or emergency situations.

7.1 Emergency Numbers

Contact information that may be utilized during an emergency is provided in Table 7.1.

Table 7.1. Emergency contact phone numbers for the Project.

Title	Number
Emergency Personnel	911
Marystown Ambulance	709-279-2121
Marystown Fire Department	709-279-1333
Burin Peninsula Health Care	709-891-1040
Marystown Police	709-279-3001
Poison Control	1-866-727-1110
Search and Rescue	1-800-563-2444
Canadian Coast Guard	709-772-4423
Marine Pollution	1-800-563-9089
Emergency Response Organization	TBD
Marine Communication and Transport Center, Placentia	709-227-2181
Marine Mammal in Distress	1-888-895-3003
Poaching and Fisheries Violations	1-800-222-8477
Department Fisheries and Land	709-292-4111
Department Fisheries and Oceans	709-772-5202
Invasive Aquatic Species	1-888-435-4040

7.2 Advisory and Other Contact Numbers

Contact information for appropriate Grieg NL and other advisory personnel are provided in Table 7.2. These designated personnel can be reached at any time, in accordance with established communications protocols.

Table 7.2. Advisory and other contact numbers for the Construction of the RAS Hatchery.

Title	Name	Number
Grieg NL General Manager		TBD
Grieg NL Production Manager		TBD
Grieg NL EHS Advisor		TBD
EHS Project Consultant		TBD
Owner Representative		TBD
Site Security and Emergency Services		TBD
Contractor Project Manager	TBD	TBD
Contractor EHS Coordinator	TBD	TBD

8.0 Resource Material

Information documents relevant to the Project were included as appendices to the Environmental Impact Statement (EIS). Copies of the EIS and associated documents can be found at Grieg NL's office in Marystown and at public libraries in Marystown (as well as Corner Brook and St. John's).

8.1 Key Reference Material

Environmental documents previously completed for the Project and relevant to the RAS Hatchery are listed in Table 8.1. Personnel are also referred to further documentation included as appendices to and referenced throughout this EPP.

Table 8.1. Key Project reference material relevant to environmental protection measures, for construction of the RAS Hatchery. Material was provided as appendices to the Project EIS (LGL Limited 2018).

Document Name and Author	Summary	Release Date
Emergency Response Plan Grieg NL	Details the emergency procedures to be implemented in response to any situation that may endanger the safety and/or health of people; the environment; property and/or equipment.	May 2018
Spill Management Plan: Land and Water Grieg NL	Details the emergency procedures to be implemented in response to a spill that may endanger the safety and/or health of people; the environment; property and/or equipment.	May 2018
Waste Management Plan Grieg NL	Details the procedures to be implemented to manage waste associated with the Project including waste generated during construction of the RAS Hatchery.	May 2018
The Cultural, Recreational and Commercial Importance of the Waters of Placentia Bay Component Study Grattan et al. 2018	Provides a detailed description of the cultural, recreational and commercial usage of Placentia Bay. It focuses on fisheries, tourism, recreational activities, marine navigation, and culturally and ecologically important areas. The study also includes mitigation measures that will be undertaken to protect these uses and areas from the potential effects of the Project, as well as follow-up monitoring.	May 2018
Wild Atlantic Salmon Component Study LGL Limited 2018	Provides a review of wild Atlantic salmon with a focus on the salmon that occur in Placentia Bay. It also reviews the potential genetic and ecological interactions between wild and farmed salmon and the mitigation measures and follow-up monitoring intended to minimize the potential effects of Grieg NL's Project.	May 2018
Fish and Fish Habitat Component Study LGL Limited 2018	Provides a review of the existing fish and fish habitat in Placentia Bay with focus on the sea cage sites, the mitigation measures intended to minimize the potential effects of the proposed Project on fish and fish habitat, and the follow-up monitoring intended to validate the effects conclusions in the EIS.	May 2018
Sustainability Report 2017 Grieg Seafood	Defines Grieg's five essential principles for sustainable food production in the ocean and introduces a greenhouse gas account which maps emissions from Grieg Seafood as an organization.	April 2018
Bird Survey – Bird Nest Search of the Marystown RAS Hatchery Site LGL Ltd.	Reports on a search conducted for active bird nests at an area designated for clearing as part of the development of the RAS Hatchery.	July 2017

9.0 Literature Cited

LGL Limited. 2018. Environmental Impact Statement of the Placentia Bay Atlantic Salmon Aquaculture Project. LGL Rep. FA0144. Rep. by LGL Limited, St. John's, NL for Grieg NL, Marystown, NL. 528 p. + appendices.

Draft

Appendix A

Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters

Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters

D.G. Wright and G.E. Hopky

Science Directorate
Central and Arctic Region
Department of Fisheries and Oceans
Winnipeg, Manitoba R3T 2N6

and

Habitat Management & Environmental Science Directorate
Department of Fisheries and Oceans
Ottawa, Ontario K1A 0E6

1998

**Canadian Technical Report of
Fisheries and Aquatic Sciences 2107**

**Pages 3097 to / à 3134
are withheld pursuant to section
sont retenues en vertu de l'article**

68(a)

**of the Access to Information Act
de la Loi sur l'accès à l'information**

Richards, Dale E

From: Duff, Jennifer L
Sent: September-20-18 3:53 PM
To: Richards, Dale E
Subject: RE: Media Lines - Grieg EIS

Hey,

I just heard from HQ and there is no update yet, but they sent the lines to the ADM Science for approval by noon today – so hopefully we will hear something soon.

Jen

From: Richards, Dale E
Sent: September-20-18 12:25 PM
To: Duff, Jennifer L
Subject: RE: Media Lines - Grieg EIS

Hi Jen,

Anything from HQ on this one? I read through the MLs again and I am wondering if maybe there may have been an mix up with the previously approved lines just representing the EM portion? Especially with the addition of last bullet on ecological effects. We will have to wait to obtain further information to know what needs to be adjusted.

I have a meeting with Barry after lunch and will check with him to see if he has received any insight.
Dale

De : Duff, Jennifer L
Envoyé : September-19-18 3:54 PM
À : Richards, Dale E
Objet : Media Lines - Grieg EIS

Hello,

The lines that are with Ottawa for approval are attached for your information. I haven't heard back from headquarters about their questions about the lines.

I've left them a message requesting more information, when I hear back I will let you know.

Thanks again,

Jen

Jen Rosa-Bian (Duff)
Communications Advisor (Science)
Fisheries and Oceans Canada/Government of Canada
jennifer.duff@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

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Richards, Dale E

From: McCallum, Barry
Sent: September-21-18 11:35 AM
To: Richards, Dale E; Duff, Jennifer L
Cc: Davis, Ben; Grant, Carole
Subject: RE: FYI - Media Lines: Grieg EIS

Sorry, meant to say "I plan to raise this with the ADM"

From: McCallum, Barry
Sent: Friday, September 21, 2018 11:25 AM
To: Richards, Dale E <Dale.Richards2@dfo-mpo.gc.ca>; Duff, Jennifer L <Jennifer.Duff@dfo-mpo.gc.ca>
Cc: Davis, Ben <Ben.Davis@dfo-mpo.gc.ca>; Grant, Carole <Carole.Grant@dfo-mpo.gc.ca>
Subject: RE: FYI - Media Lines: Grieg EIS

I would like to know more about why we were told the ADM felt the media lines we inconsistent with the SAR. The plan to raise this with the ADM directly.

Barry

From: Richards, Dale E
Sent: Friday, September 21, 2018 11:21 AM
To: McCallum, Barry <Barry.McCallum@dfo-mpo.gc.ca>
Cc: Davis, Ben <Ben.Davis@dfo-mpo.gc.ca>; Grant, Carole <Carole.Grant@dfo-mpo.gc.ca>
Subject: TR: FYI - Media Lines: Grieg EIS

De : Duff, Jennifer L
Envoyé : September-21-18 11:19 AM
À : Richards, Dale E; Parrill, Erika; Korchoski, Connie
Cc : Ruddock, Stella D; Pittman, Erika
Objet : FYI - Media Lines: Grieg EIS

Hello,

The ADM Science has approved the media lines about the Grieg EIS, and has not made any changes.

I've asked Natalie to find out if the lines will be sent for further approval in HQ. I will let you know when I hear back.

Thanks,

Jen

Jen Rosa-Bian (Duff)
Communications Advisor (Science)
Fisheries and Oceans Canada/Government of Canada
jennifer.duff@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

Follow us on Twitter! @DFO_NL

No information has been removed or severed from this page

Richards, Dale E

From: McCallum, Barry
Sent: September-21-18 11:51 AM
To: Duff, Jennifer L
Cc: Davis, Ben; Grant, Carole; Pittman, Erika; Richards, Dale E
Subject: RE: FYI - Media Lines: Grieg EIS

Thanks for the clarification Jen, I heard a slightly different message. From where I sit, the focus of the media lines should be key points of the science, not the SAR. I will discuss with the ADM.

barry

From: Duff, Jennifer L
Sent: Friday, September 21, 2018 11:44 AM
To: McCallum, Barry <Barry.McCallum@dfo-mpo.gc.ca>
Cc: Davis, Ben <Ben.Davis@dfo-mpo.gc.ca>; Grant, Carole <Carole.Grant@dfo-mpo.gc.ca>; Pittman, Erika <Erika.Pittman@dfo-mpo.gc.ca>; Richards, Dale E <Dale.Richards2@dfo-mpo.gc.ca>
Subject: RE: FYI - Media Lines: Grieg EIS

Hello,

We were told that the ADM Science asked "Is there anything else we can say about the CSAS report itself?" Our communications colleagues told us that she would like to have a message that specifically addressed the science. We went back to our communications colleagues and requested a clarification because we felt that the science lines provided appropriately addressed the report. If I understand correctly, the ADM science reviewed the lines again at this point and approved them.

I mentioned to Dale that there seems to be a change with respect to how the ADM Science is reviewing CSAS reports and media lines. My understanding is that she is not approving CSAS postings until media lines are also approved. I have requested a clarification from headquarters, perhaps you could mention this to her as well if there is an opportunity. We can have media lines ready to go to headquarters earlier if this is the case.

Thanks,

Jen

Jen Rosa-Bian (Duff)
Communications Advisor (Science)
Fisheries and Oceans Canada/Government of Canada
jennifer.duff@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

Follow us on Twitter! [@DFO_NL](https://twitter.com/DFO_NL)

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To: Richards, Dale E; Duff, Jennifer L

Cc: Davis, Ben; Grant, Carole
Subject: RE: FYI - Media Lines: Grieg EIS

I would like to know more about why we were told the ADM felt the media lines we inconsistent with the SAR. The plan to raise this with the ADM directly.

Barry

From: Richards, Dale E
Sent: Friday, September 21, 2018 11:21 AM
To: McCallum, Barry <Barry.McCallum@dfo-mpo.gc.ca>
Cc: Davis, Ben <Ben.Davis@dfo-mpo.gc.ca>; Grant, Carole <Carole.Grant@dfo-mpo.gc.ca>
Subject: TR: FYI - Media Lines: Grieg EIS

De : Duff, Jennifer L
Envoyé : September-21-18 11:19 AM
À : Richards, Dale E; Parrill, Erika; Korchoski, Connie
Cc : Ruddock, Stella D; Pittman, Erika
Objet : FYI - Media Lines: Grieg EIS

Hello,

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I've asked Natalie to find out if the lines will be sent for further approval in HQ. I will let you know when I hear back.

Thanks,

Jen

Jen Rosa-Bian (Duff)
Communications Advisor (Science)
Fisheries and Oceans Canada/Government of Canada
jennifer.duff@dfo-mpo.gc.ca/Tel: 709-772-7633
Media Inquiries: Media.NL@dfo-mpo.gc.ca/Tel: 709-772-3375

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Johnson, Roger

From: Johnson, Roger
Sent: Monday, September 24, 2018 8:21 AM
To: Finn, Ray
Subject: Grieg

FYI [REDACTED] with Grieg has requested a meeting this AM – I have offered a time etc. (tentatively 1130 hrs)

[REDACTED]

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

s.19(1)

s.21(1)(b)

Parrill, Erika

From: Parrill, Erika
Sent: Monday, September 24, 2018 8:36 AM
To: Korchoski, Connie
Cc: Richards, Dale E
Subject: RE: For your Final review - RSVP by September 27 – SRR2018/045

Hi Connie – Dale and I can review the PDF-proof of the Grieg SRR as there were many authors to this document.

-Erika

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Erika Parrill
Centre for Science Advice – NL Region

From: Korchoski, Connie
Sent: Monday, September 24, 2018 8:27 AM
To: Parrill, Erika <Erika.Parrill@dfo-mpo.gc.ca>
Subject: FW: For your Final review - RSVP by September 27 – SRR2018/045

s.19(1)

Good morning. [REDACTED]

Who should I forward this for final review? Carol Grant??

Connie

From: Metcalfe, Christina
Sent: 2018-September-21 4:23 PM
To: Korchoski, Connie
Subject: For your Final review - RSVP by September 27 – SRR2018/045

Hi Connie,

Thank you for submitting Science Response Report 2018/045 Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project (Parrill). It will be posted following your approval by September 27th, 2018 (within the next 5 business days). If you need more time, please let us know

Please note: The purpose for PDF-proof approvals is to make sure that the document displays correctly, and should not be an opportunity to review content since the document has already been approved. The understanding with the CSA's is that if we don't hear back from you in the next 5 working days, it will be assumed that the document is approved and we will proceed with the release of the document so not to hold up the publication process.

The links below lead you to the CSAS development website where you will find the webpage text and the document converted to PDF (Adobe Acrobat) for your PDF-proof approval. Your approval can be communicated by replying to this e-mail and the document will be posted shortly after your approval.

English: http://wwwdev.ncr.dfo-mpo.ca/csas-sccs/Publications/ScR-RS/2018/2018_045-eng.html

French: http://wwwdev.ncr.dfo-mpo.ca/csas-sccs/Publications/ScR-RS/2018/2018_045-fra.html

The final MS Word version is on the National Shared Drive at :

<\\svmonkenclu01\NATSHARE01\NATSHARED\DATA\csas-sccs\Publications\Submissions\NL\PDF-proof>

Please note that your edits must be made in track changes mode.

Also, please note that the following edits were made to the document:

English:

- Changed title Conclusions from Heading 3 to Heading 2.

French:

- Changed Conclusions from Heading 3 to Heading 2.
- Applied "citation" style to French correct citation and citation-translated style to English correct citation.

Please let me know if you have any questions,

Christina

Christina Metcalfe

Web and Publications Assistant, Canadian Science Advisory Secretariat
Fisheries and Oceans Canada /

Assistante de site Web et de publications, Secrétariat canadien de consultation scientifique
Pêches et Océans Canada

www.dfo-mpo.gc.ca/csas-sccs/ - Tel: 613-990-0659

Christina.Metcalfe@dfo-mpo.gc.ca



Government
of Canada

Gouvernement
du Canada

Canada

From: Parrill, Erika
Sent: Monday, September 24, 2018 4:45 PM
To: Ferris, Laura
Cc: Korchoski, Connie; Richards, Dale E
Subject: FW: For your Final review - RSVP by September 27 – SRR2018/045

003143

Connie

From: Metcalfe, Christina
Sent: 2018-September-21 4:23 PM
To: Korchoski, Connie
Subject: For your Final review - RSVP by September 27 – SRR2018/045

Hi Connie,

Thank you for submitting Science Response Report 2018/045 Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project (Parrill). It will be posted following your approval by September 27th, 2018 (within the next 5 business days). If you need more time, please let us know

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The links below lead you to the CSAS development website where you will find the webpage text and the document converted to PDF (Adobe Acrobat) for your PDF-proof approval. Your approval can be communicated by replying to this e-mail and the document will be posted shortly after your approval.

English: http://wwwdev.ncr.dfo-mpo.ca/csas-sccs/Publications/ScR-RS/2018/2018_045-eng.html

French: http://wwwdev.ncr.dfo-mpo.ca/csas-sccs/Publications/ScR-RS/2018/2018_045-fra.html

The final MS Word version is on the National Shared Drive at :

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Please note that your edits must be made in track changes mode.

Also, please note that the following edits were made to the document:

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- Changed title Conclusions from Heading 3 to Heading 2.

French:

- Changed Conclusions from Heading 3 to Heading 2.
- Applied "citation" style to French correct citation and citation-translated style to English correct citation.

Please let me know if you have any questions,

Christina

Christina Metcalfe

Web and Publications Assistant, Canadian Science Advisory Secretariat
Fisheries and Oceans Canada /
Assistante de site Web et de publications, Secrétariat canadien de consultation scientifique
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Canada

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sont des duplicatas des
pages 2687 to / à 2712**

Johnson, Roger

From: Johnson, Roger
Sent: Monday, September 24, 2018 11:25 AM
To: [REDACTED]
Subject: Re: Opportunity for a quick meet

Just come to the guard shack and mention my name you are on the list.

Then go to the main door and sign in they will call me

If any problems my number is [REDACTED]

Sent from my BlackBerry 10 smartphone on the Bell network.

From: [REDACTED]
Sent: Monday, September 24, 2018 9:46 AM
To: Johnson, Roger
Subject: RE: Opportunity for a quick meet

Perfect. See you then.

Regards

[REDACTED]
Grieg NL
P.O. Box 457
205 McGettigan Blvd.
Marystown, NL A0E 2M0

Tel: (709) 279-3440

Cell: [REDACTED]



www.griegnl.ca

s.16(2)(c)

s.19(1)

From: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Sent: September 24, 2018 8:04 AM
To: [REDACTED]
Subject: RE: Opportunity for a quick meet

Thought that was you I kept seeing on the news. How about 1130 hrs

From: [REDACTED]
Sent: Monday, September 24, 2018 7:57 AM

To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>

Subject: Opportunity for a quick meet

Hello Roger;

[REDACTED]
[REDACTED] for Grieg NL with multiple other responsibilities on the business side. I am in St. John's today
[REDACTED] Is it possible that you might be able to fit me in for 15 minutes or so this morning as
there are a couple of matters concerning our project I'd like to discuss / update you on? Please let me know.

You can reach me at this email or at [REDACTED]

Regards

[REDACTED]
[REDACTED]
Grieg NL
P.O. Box 457
205 McGettigan Blvd.
Marystown, NL A0E 2M0

Tel: (709) 279-3440

Cell: ([REDACTED])



s.19(1)

Johnson, Roger

From: Johnson, Roger
Sent: Monday, September 24, 2018 1:47 PM
To: Hendry, Christopher
Subject: FW: draft EPP for review
Attachments: FA0159-GriegNL-EPP-RAS Hatchery Operations.pdf; FA0159-GriegNL-EPP-RAS Hatchery Construction.pdf

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: Thursday, September 20, 2018 2:45 PM
To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelan@gov.nl.ca>; Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Denning, Allison (HC/SC) (allison.denning@canada.ca) <allison.denning@canada.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>; Hingston, Michael (EC) (michael.hingston@canada.ca) <michael.hingston@canada.ca>; Squires, Susan <SusanSquires@gov.nl.ca>
Subject: draft EPP for review

Hi All,

I've attached the EPP docs for the hatchery construction and operations for your review. This should make for a more productive meeting with the proponent on Wednesday (10 – 12:30) next week.

Joanne
709.729.2822

“This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender.”

**Pages 3175 to / à 3299
are duplicates of
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pages 3010 to / à 3134**

Johnson, Roger

From: EA Project Comments <EAProjectComments@gov.nl.ca>
Sent: Tuesday, September 25, 2018 5:20 PM
To: Hanchar, Dorothea; Ficzero, Vicki; Angelopoulos, John; Adams, Blair; kawaja, jonathan; Whelan, Dr. Daryl S; Ginn, Melissa (Melissa.Ginn@tc.gc.ca); Denning, Allison (HC/SC) (allison.denning@canada.ca); Johnson, Roger; Hingston, Michael (EC) (michael.hingston@canada.ca)
Cc: Squires, Susan
Subject: RE: draft EPP for review
Attachments: FA0159-GriegNL-EPP-RAS Hatchery Operations.pdf; FA0159-GriegNL-EPP-RAS Hatchery Construction.pdf; 4. 1834_EAC_EIS review comments for proponent.pdf; EA Committee Contact Information.pdf


Good Afternoon,

I hope everyone's had a chance to review the EPP (hatchery) drafts in preparation for tomorrow morning's meeting. The proponent and consultant would like to receive some guidance from each of you as to whether or not additional information is needed in the EPP from the perspective of your department's mandate. I've attached documents to guide our discussions during the meeting.

The following EAC reps are planning to attend the meeting in person:

Dorothea
Vicki
Daryl
Roger
Joanne

Jonathan and Allison will be joining the meeting by phone/skype. Please call the following conference line to join by phone:

Toll-free number 1-800-220-3466
Local number 709-570-2074
Conference ID 

I haven't heard from John (TCII), Blair (FLR) or Michael (ECCC), but feel free to click on the skype link in your calendar invite and call in on the conference line to participate in the meeting tomorrow (10AM – 12:30PM NDT).

Call me at 729-2822 if you have any questions or concerns.

Regards,

Joanne

s.16(2)(c)

Joanne Sweeney

Environmental Assessment Division
Department of Municipal Affairs and Environment
PO Box 8700, St. John's NL A1B 4J6
Tel. (709) 729-2822

From: Sweeney, Joanne

Sent: Thursday, September 20, 2018 2:45 PM

To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelan@gov.nl.ca>; Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Denning, Allison (HC/SC) (allison.denning@canada.ca) <allison.denning@canada.ca>; Johnson, Roger (Roger.Johnson@dfo-mpo.gc.ca) <Roger.Johnson@dfo-mpo.gc.ca>; Hingston, Michael (EC) (michael.hingston@canada.ca) <michael.hingston@canada.ca>; Squires, Susan <SusanSquires@gov.nl.ca>

Subject: draft EPP for review

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Joanne

709.729.2822

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est un duplicata de la
page 3134

**Pages 3427 to / à 3545
are duplicates of
sont des duplicatas des
pages 2535 to / à 2653**

Ms. Joanne Sweeney
joannesweeney@gov.nl.ca

Chairperson, Environmental Assessment Division
Department of Municipal Affairs and Environment

Dr. Daryl S. Whelan
DarylSWhelan@gov.nl.ca

Aquatic Animal Health Division
Department of Fisheries and Land Resources

Mr. Jonathan Kawaja
jonathankawaja@gov.nl.ca

Aquaculture Development Division
Department of Fisheries and Land Resources

Dr. Blair Adams
BlairAdams@gov.nl.ca

Forestry and Wildlife Branch
Department of Fisheries and Land Resources

Ms. Vicki Ficzero
vickificzero@gov.nl.ca

Pollution Prevention Division
Department of Municipal Affairs and Environment

Ms. Dorothea Hanchar
DorotheaHanchar@gov.nl.ca

Water Resources Management Division
Department of Municipal Affairs and Environment

Mr. John Angelopoulos
johnangelopoulos@gov.nl.ca

Tourism Product Development
Tourism, Culture, Industry and Innovation

Mr. Roger Johnson
Roger.Johnson@dfo-mpo.gc.ca

Fisheries and Oceans Canada

Mr. Michael Hingston
michael.hingston@canada.ca

Environment and Climate Change Canada

Ms. Allison Denning
allison.denning@canada.ca

Health Canada

Ms. Melissa Ginn
Melissa.Ginn@tc.gc.ca

Transport Canada

Johnson, Roger

From: Hendry, Christopher
Sent: Wednesday, September 26, 2018 8:29 AM
To: Johnson, Roger
Subject: RE: draft EPP for review

I have reviewed the draft EPP and have little commentary on the construction phase. For the operational phase, it seems adequate for concerns DFO would have on impacts to fish or fish habitat. There is sufficient rigour around fish transfers to minimize the likelihood of escapes. It would be useful to include a comment that any drugs or pesticides will be stored properly and used in accordance with the AAR.

Chris

From: Johnson, Roger
Sent: September-24-18 1:47 PM
To: Hendry, Christopher
Subject: FW: draft EPP for review

From: Sweeney, Joanne <joannesweeney@gov.nl.ca>
Sent: Thursday, September 20, 2018 2:45 PM
To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelan@gov.nl.ca>; Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Denning, Allison (HC/SC) (allison.denning@canada.ca) <allison.denning@canada.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>; Hingston, Michael (EC) (michael.hingston@canada.ca) <michael.hingston@canada.ca>; Squires, Susan <SusanSquires@gov.nl.ca>
Subject: draft EPP for review

Hi All,

I've attached the EPP docs for the hatchery construction and operations for your review. This should make for a more productive meeting with the proponent on Wednesday (10 – 12:30) next week.

Joanne
709.729.2822

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Johnson, Roger

From: Johnson, Roger
Sent: Wednesday, September 26, 2018 2:43 PM
To: Bieger, Tilman
Subject: Grieg

To follow up on our brief conversation.

The meeting this AM went well, the draft EPP was well received by all and required only minor changes – which the company had no problem with. The final draft will be to the province this PM with them sending to us (and others) soon thereafter.

If the required minor changes are incorporated into the new draft, I will email the province that our minor concerns have been addressed. I will of course keep you/Ray informed.

BTW - > the NAIA conference started this PM (really gets underway tomorrow), I will be down there for a lot of tomorrow (and Friday) but will be taking the call on CSSP tomorrow as discussed. Also available on Blackberry if you need anything.

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

Johnson, Roger

From: EA Project Comments <EAProjectComments@gov.nl.ca>
Sent: Wednesday, September 26, 2018 2:50 PM
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Cc: Squires, Susan
Subject: EPP Hatchery submitted for review and approval
Attachments: FA0159-GriegNL-EPP-RAS Hatchery Construction-26Sept2018.pdf; FA0159-GriegNL-EPP-RAS Hatchery Operations-26Sept2018.pdf

Good Afternoon,

Thank you for your attendance and participation at this morning's meeting. Grieg NL has made the additions/revisions that were noted during the meeting and has submitted the final version of the EPP for hatchery construction and operations, which I've attached for your review. Please review both EPPs and let me know whether they are acceptable from your department's perspective or whether revisions and/or further information is needed.

I hope to make a recommendation to the MAE Minister regarding the acceptability of the Hatchery EPPs, on behalf of the EA Committee, by the end of this week.

Please call me at (709) 729-2822 or send me an email if you have any questions or concerns.

Regards,

Joanne

Joanne Sweeney

Environmental Assessment Division
Department of Municipal Affairs and Environment
PO Box 8700, St. John's NL A1B 4J6
Tel. (709) 729-2822

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2018

**PLACENTIA BAY ATLANTIC SALMON AQUACULTURE PROJECT
ENVIRONMENTAL PROTECTION PLAN (EPP):
RAS HATCHERY CONSTRUCTION**



GRIEG NL

9/26/2018

003550

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Preface

Grieg NL's Environmental Protection Plan (EPP) for the Placentia Bay Atlantic Salmon Aquaculture Project is a directive document that provides detailed steps to avoid or minimize negative effects on the environment. The EPP covers construction of the Recirculating Aquaculture System (RAS) Hatchery located in Marystown, Newfoundland and Labrador (NL). The responsibilities and procedures presented in this document are designed to ensure the efficacy of the plan and to allow for ongoing updates to the plan to accommodate improvements. This Preface includes overviews of the following:

- Distribution List
- EPP Responsibilities
- EPP Revision Procedures

Distribution List

The EPP will be provided to relevant Grieg NL personnel, contractors, subcontractors, and government agencies designated as having a surveillance responsibility.

Grieg NL Personnel

- General Manager
- Production Manager
- Environment, Health and Safety Advisor
- Owner Representative
- Grieg NL Site Manager(s) (Land and Sea) where appropriate

Contractors

- General Manager
- Environment, Health and Safety Manager

Subcontractors

- General Manager
- Environment, Health and Safety Manager

Government Agencies

- Department of Municipal Affairs and Environment (DMAE)
- Department of Fisheries and Land Resources (DFLR)
- Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada (ECCC)
- Transport Canada

EPP Responsibilities

The responsibilities of Grieg NL and its employees as well as those of contractors and subcontractors are summarized below.

As the proponent, Grieg NL shall:

- Provide approval for the final issued version of the EPP and subsequent revisions.
- Inspect and monitor project activities during construction of the RAS Hatchery.
- Conduct EPP reviews on a regular and as-needed basis.
- Communicate with relevant government agencies and local stakeholders as required.

The Grieg NL Environment, Health and Safety (EHS) Advisor or their designated representative(s) shall:

- Be responsible for implementation of the EPP.
- Review and approve revision requests.
- Conduct EPP reviews on a regular and as-needed basis.
- Maintain document control.
- Ensure the EPP holders and their personnel are familiar with the EPP and its procedures.
- Strive for compliance with all permits, authorizations, and approval conditions; and ensure that appropriate supervisory personnel are on site during project activities as appropriate.

The Grieg NL Site Managers or their designated representative(s) shall:

- Distribute revisions to EPP holders.
- Be familiar with all aspects of the EPP.
- Confirm that all activities are conducted in accordance with the EPP.
- Hold an environmental awareness session for each Contractor and its personnel, and other personnel to be involved in the Project.
- Report on the efficacy of the EPP.
- Attend weekly contractor meetings.
- Identify any deficiencies in the plan and propose appropriate changes.
- Direct appropriate contingency actions and enact external notifications procedures in the event of an incident.
- In his or her absence, designate a qualified replacement.
- Manage the environmental inspection and monitoring needed to meet EPP requirements and reporting requirements of Grieg NL.

EPP holders shall:

- Keep EPP copy current and enter all revisions on the revision control record.
- Familiarize themselves and their personnel with the EPP and any revisions.
- Initiate changes to improve the EPP.

Contractors, Subcontractors and Site Personnel shall:

- Become familiar with the EPP.
- Become knowledgeable of reporting procedures.
- Comply with the EPP, contract requirements, and applicable laws/regulations.
- Obtain applicable permits, approvals and authorizations in coordination with Grieg NL personnel.
- Attend all required EHS training and orientation programs.
- Report all incidents of non-compliance with the EPP.

EPP Revision Procedures

The EPP is a controlled document and revisions may only be made with the approval of Grieg NL. EPP users are encouraged to submit suggestions for changes and improvements to the EPP, using the *EPP Revision Request Initiation Form* (see below). Upon receipt of suggestions, and where appropriate, designated Grieg NL personnel will prepare a proposed revision to be submitted for approval by Grieg NL's EHS Advisor or another designated representative. Approved revisions will be issued to all members of the EPP Distribution List (see above), accompanied by a Revision Control Record (see below), which will provide the EPP section(s) being superseded and revision instructions. Each revision will also be accompanied by an updated EPP Table of Contents.

Within two working days of receiving an approved EPP revision, EPP users are to:

- Confirm all listed pages have been received in accordance with the Revision Control Record;
- Read the revised text;
- Insert the revised pages into the appropriate position within the EPP, and remove and destroy the superseded pages;
- Confirm the EPP document is in accordance with the updated Table of Contents;
- Enter the revision number and date on the Revision Control Record, and sign; and
- Incorporate the revision into Project activities, and ensure all personnel are familiar with the revision.

Grieg NL Placentia Bay Atlantic Salmon Aquaculture Project Environmental Protection Plan (EPP)

Revision Request Initiation Form

Name:

Affiliation (Position and Company / Government Department):

Date (D-M-Y):

EPP Section to be Revised:

Nature of Revision (e.g., sewage disposal, noise control, etc.):

Rationale for Revision (e.g., environmental or worker safety, etc.):

Suggested Revision:

Please submit to TBD, Production Manager, Grieg NL at the following address:
205 McGettigan Blvd., Marystown, NL A0E 2M0

Revision Control Record for the EPP

Revision Number	Date (D-M-Y)	Revised EPP Section(s)	Revision Instructions and Source	EPP Holder's Signature

List of Acronyms

AAR	Aquaculture Activities Regulations
ATV	All-terrain Vehicle
BMA	Bay Management Area
BPWMC	Burin Peninsula Waste Management Corporation
CEPA	<i>Canadian Environmental Protection Act</i>
CWS	Canadian Wildlife Service
DFLR	Department of Fisheries and Land Resources
DFO	Fisheries and Oceans Canada
DMAE	Department of Municipal Affairs and Environment
ECCC	Environment and Climate Change Canada
EHS	Environment, Health and Safety
EIS	Environmental Impact Statement
EPP	Environmental Protection Plan
FCR	Feed Conversion Ratio
GAP	Gasoline and Associated Products
MBCA	<i>Migratory Birds Convention Act</i>
MBR	Migratory Birds Regulations
MSDS	Material Safety Data Sheets
NL	Newfoundland and Labrador
NLDGS	Newfoundland and Labrador Department of Government Services
NLDNR	Newfoundland and Labrador Department of Natural Resources
OCI	Ocean Choice International
PPE	Personal Protection Equipment
RAS	Recirculating Aquaculture System
SARA	<i>Species at Risk Act</i>
SOP	Standard Operating Procedures
WHMIS	Workplace Hazardous Materials Information System

1.0 Introduction

This Environmental Protection Plan (EPP) has been developed by Grieg NL to describe environmental protection procedures for activities associated with the construction of the land-based hatchery, which is a key component of the Placentia Bay Atlantic Salmon Aquaculture Project. The hatchery facility, referred to as the Recirculating Aquaculture System (RAS) Hatchery, is located in the Marystown Marine Industrial Park adjacent to Mortier Bay. The EPP has been developed in compliance with a condition of the Project release issued by the provincial Department of Municipal Affairs and Environment (DMAE) at the conclusion of an environmental assessment process. The EPP will serve as a set of instructions for Project-related activities and will list the various environmental permits and authorizations to be issued by different agencies. Separate EPP documents will be prepared for operation of the RAS Hatchery and construction and operation of the sea cage sites in Placentia Bay.

This Grieg NL EPP is considered a living document and will be reviewed and updated on a regular and as-needed basis throughout the various stages of the Project life. Consequently, this is a controlled-distribution document, intended to be maintained in an updated condition by each listed/approved recipient (see Preface for details).

1.1 Purpose of the EPP

The EPP is an important component of overall Project planning and implementation of Project activities. It is considered part of Grieg NL's overall Environment, Health and Safety management system (see Section 3).

The EPP is a stand-alone document describing the responsible Project staff and environmental protection procedures for activities associated with the construction of the RAS Hatchery. Environmental protection procedures for the operation phase and decommissioning and rehabilitation phase of the Project will be developed at a later date. In addition, the EPP clearly outlines responsible company personnel include front-line workers, occupational health and safety and environmental staff.

This EPP will be used to ascertain that Grieg NL's environmental-related commitments are implemented, adhered to, and monitored. The EPP will serve to:

- Provide a record of mitigation measure implementation.
- Provide a functional management framework to ensure regulatory compliance and to identify opportunities for continuous improvement in environmental performance.
- Identify and document compliance with applicable legislation, permits and authorizations associated with each Project phase and ensure adequate communication with government environmental surveillance staff.

1.2 Organization of the EPP

The EPP is organized as outlined below and is designed to address DMAE requirements and to facilitate ease of use. The organization of the EPP follows the outline provided in the Grieg NL Environmental Impact Statement (see Section 8.2 of the EIS; LGL Limited 2018) to the extent possible.

Preface – Identifies the distribution list for the EPP and provides document revision and control procedures.

Section 1: Introduction – Lays out the organization of the EPP and overviews the purpose of the document.

Section 2: Overview of the Project – Highlights the key components, location, activities, and timeline for the Project to provide context for the EPP user.

Section 3: Environment, Health and Safety System – Overviews Grieg NL's Environment, Health and Safety (EHS) system, the relationship of the EPP to the Grieg NL Policy on sustainability; the organization, development and implementation of the EPP; and employee environmental orientation.

Section 4: Environmental Protection Procedures – Details environmental protection procedures to be employed during routine construction activities. This section also includes a summary of key environmental concerns associated with Project activities.

Section 5: Contingency Plans – Provides contingency plans for potential unplanned and accidental events such as spills of fuel or other hazardous material, wildlife encounters, and the discovery of historic resources.

Section 6: Legislation, Permits and Authorizations – Outlines the legislation, required permits, approvals and authorizations for the construction of the RAS Hatchery.

Section 7: Contact List – Provides emergency, advisory and other contact numbers for corporate personnel, contractors, external resources and regulators.

Section 8: Resource Material – Identifies guidelines and resource material relevant to environmental protection measures, mitigation and monitoring.

2.0 Project Description

The Placentia Bay Atlantic Salmon Aquaculture Project has two primary components: (1) a land-based Recirculating Aquaculture System (RAS) Hatchery located in the Marystown Marine Industrial Park and (2) sea cage sites located in the northern portion of Placentia Bay that will be used to grow the salmon to market size (Figure 2.1). The development of the Project, including construction and operation of the RAS Hatchery and sea farms, will undergo a phased approach before reaching peak production of seven million salmon per year. It is anticipated that the RAS Hatchery will be operational in Year 2 and reach full production capacity in Year 6. The first harvest at peak production at the sea farms is anticipated to occur in Year 8.

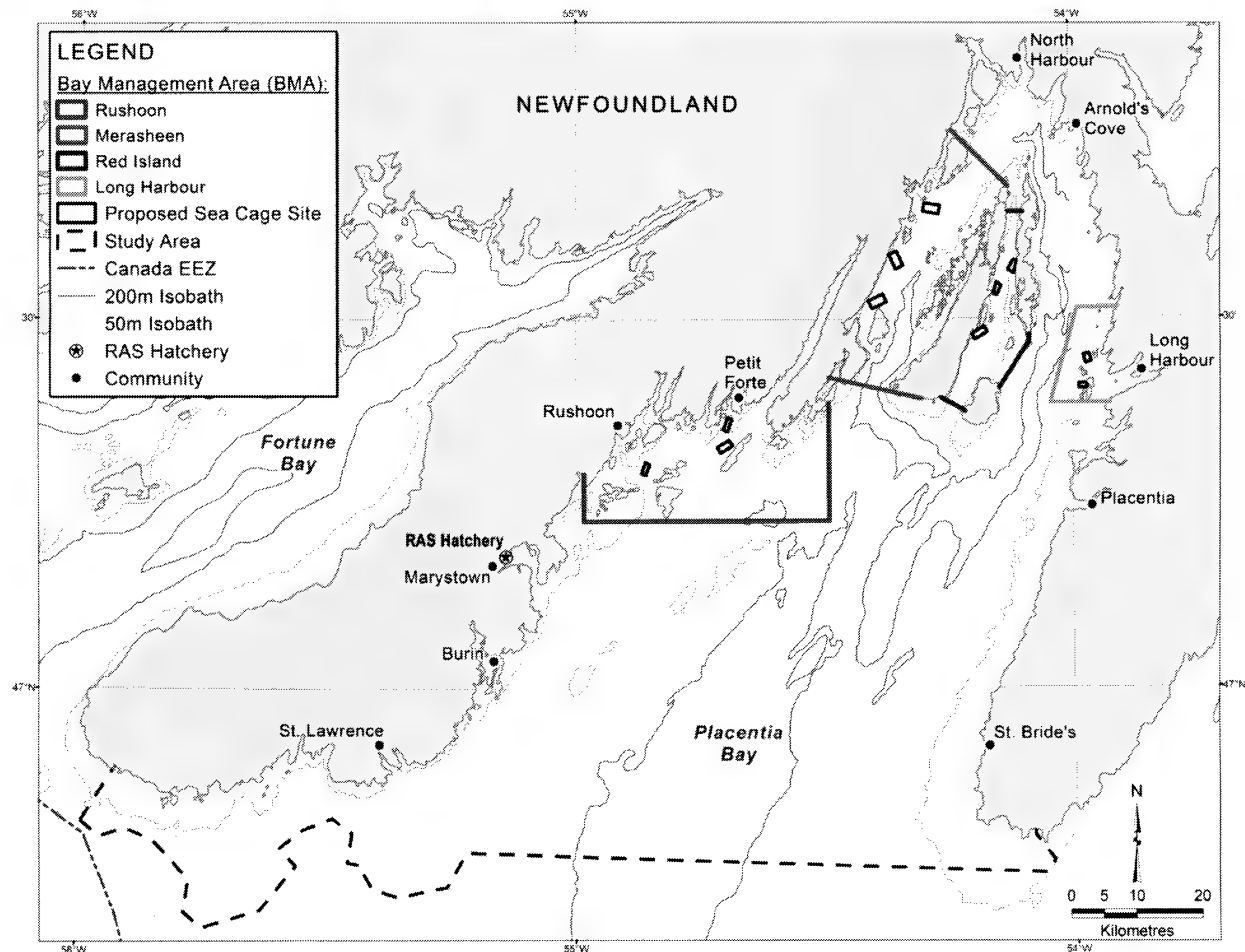


Figure 2.1. The locations of the RAS Hatchery, sea cage sites, and Bay Management Areas for Grieg NL's Placentia Bay Atlantic Salmon Aquaculture Project. [Also shown is the Study Area used in the Environmental Impact Statement].

At the RAS Hatchery, smolt will be grown to sizes ranging from 350–1,400 g and then will be transferred to a well boat and delivered directly to sea cage sites. Eleven sea cage sites will be located within four Bay Management Areas (BMAs), which have been established for biosecurity purposes. Three of the

BMAs are planned for semi-annual production and one BMA is planned for seasonal production. The semi-annual and seasonal sea cage sites will each have a maximum of 12 and 6 sea cages, respectively. Each of these sea cages can hold 160,000 salmon. At peak production, there will be seven active sea cage sites with 78 sea cages in operation per year. Each year, the sea cage sites in one BMA will be fallowed before the sea cages will be restocked with salmon.

Each sea cage site will be attended by several vessels including a feed/accommodation barge, satellite feed barge, service vessel, crew vessel, and a work boat. Once salmon have reached market size (~5 kg) they will be transferred to a dead hold vessel and then onto a third-party for processing.

Personnel working at the sea cage sites will be transported via dedicated crew vessels. Grieg NL anticipates one-week shifts at sea where personnel will live aboard the feed/accommodation barge. The crew change sites will have specific areas for embarkation to and disembarkation from the proposed sea cage sites, which is designed to avoid cross-contamination. Crew changes for the proposed sea cage sites in the Rushoon, Merasheen and Red Island BMAs will be conducted in Petit Forte and in Long Harbour for the Long Harbour BMA.

Services and supplies for all BMAs will be provided using wharf facilities at two former Ocean Choice International (OCI) premises, one each in Marystown and Burin. One of the resupply sites will be designated “inflow” and the other “outflow” to prevent cross-contamination of clean/new equipment going to the sea cage sites and used equipment returning for cleaning and servicing. Additionally, the resupply site designated as outflow will receive waste from the sea cage sites.

2.1 RAS Hatchery

The RAS Hatchery consists of three primary biosecure facilities (i.e., First-Feeding, Smoltification, and Post-Smolt) that have a total area of 30,000 m² (Figure 2.2). The site for the RAS Hatchery in the Marystown Marine Industrial Park was cleared in 2016 and 2017. However, blasting and some grubbing remains to be done before construction on the buildings can commence. The lots in the Marystown Marine Industrial Park are already serviced with three-phase power, municipal water and sewer, and a paved access road. The RAS that will be used at the hatchery is considered state-of-the-art and operates by filtering water from the fish tanks so it can be reused. The system uses 300 L of water per minute versus the 500,000 L of water per minute, which is typical in a flow-through system that is not reusing any water to accomplish an equivalent production of smolt.

2.2 Sea Cage Sites

The proposed sea cage sites (see Figure 2.1) have areas ranging from 0.8 km² to 3.2 km² and occur in water depths ranging from ~10 m to 308 m. Sites have been selected based on suitable water currents and depths, bottom type, shelter from wind and waves, and input from local users and regulatory agencies. Semi-annual and seasonal sea cage sites will have 12 or 6 sea cages, respectively; sea cages will be arranged in a line with a feed barge located between the cages. The sea cages and associated mooring system used to house fish will be state-of-the-art, heavy duty Aqualine Midgard Systems. Each sea cage is 50 m in diameter, extends 45 m below the surface, and will consist of a cage net, floating collar, gangway, sinker ring (tube), winches, and fish mortality removal system.

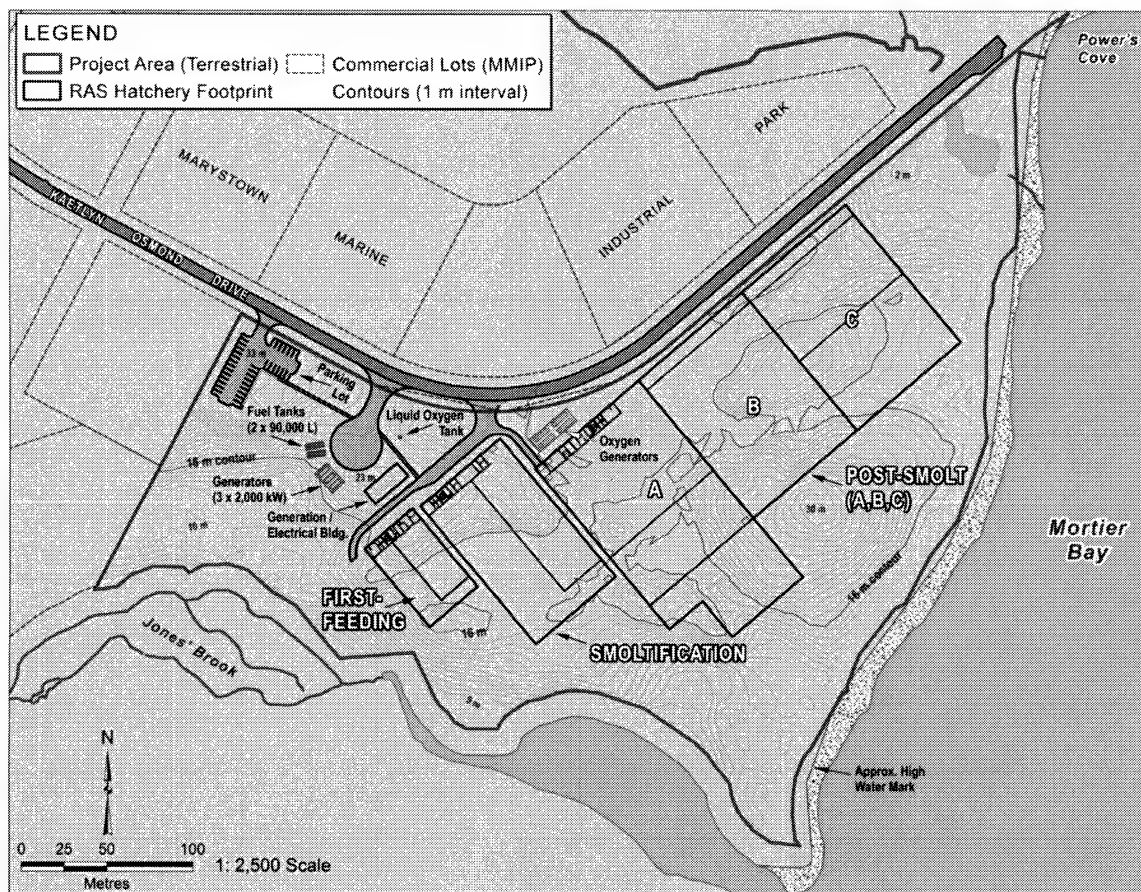


Figure 2.2. Schematic of RAS Hatchery in the Marystown Marine Industrial Park.

2.3 Best Available Technology

Grieg NL will use the best available technology at the RAS Hatchery and sea cage sites, along with a number of mitigation measures that go beyond the common aquaculture industry standard. These measures include such approaches as the utilization of sterile triploid all-female Atlantic salmon to minimize potential effects on wild salmon, the use of lumpfish (*Cyclopterus lumpus*) to control sea lice, and following protocols that exceed government requirements.

3.0 Environment, Health and Safety Management System

Grieg NL recognizes environmental protection as one of their guiding principles and a key component of sound business performance. Grieg NL is committed to providing a quality service in a manner that ensures a safe and healthy workplace for its employees and minimizes potential negative effects on the surrounding environment. Grieg NL will operate in compliance with all federal, provincial and municipal environmental legislation, and strive to use pollution prevention and environmental best practices whenever possible.

Grieg NL's EHS system will:

- Integrate the consideration of environmental concerns and interactions into all decision making and activities.
- Promote environmental awareness among its employees and require them to work in an environmentally responsible manner.
- Train, educate and inform its employees about environmental issues that may affect their work.
- Promote sustainability through the practice of reuse, recycle, refurbish and reduce waste.
- Avoid or reduce use of hazardous materials and products, seek substitutions when feasible, and take all reasonable steps to protect human health and the environment when such materials must be used, stored and disposed of.
- Operate by the highest standards possible to ensure protection of the environment while avoiding unplanned events (spills).
- Develop and maintain appropriate emergency and spill response capabilities.
- Train all employees in best practices for health and safety.
- Provide necessary Personal Protective Equipment (PPE) and instruction for its use and care.
- Develop and enforce safety and health rules, requiring that employees comply with these rules as a condition of employment.
- Investigate every incident, promptly and thoroughly, to determine its cause, and whenever possible, put measures in place to ensure against recurrence.
- Strive to continually improve environmental performance by periodically reviewing and updating EHS policy.

3.1 Roles and Responsibilities

The following section outlines the management structure, roles and responsibilities of personnel, for the implementation of Grieg NL's EHS policy for the construction phase of the RAS Hatchery.

Grieg NL General Manager: Primary person responsible for overall development of the RAS Hatchery, including environmental issues. Specific environmental responsibilities include:

- Ensuring environmental considerations are a part of the Project decision making process.
- Ensuring adequate plans and resources are in place to achieve environmental commitments to minimize environmental effects.
- Reviewing incident reports as they are submitted and ensuring the proper course of action is taken to manage unexpected environmental conditions or events.

EHS Project Consultant: Safety person responsible for Project construction. Will work with the team, report to the Grieg NL General Manager and be responsible for:

- Reviewing contractor documents.
- Overview of work being performed by contractors.
- Liaising with regulatory agencies on matters of EHS.
- Identifying any additional permitting requirements and submitting applications on behalf of the Contractor in a timely manner.

Owner Representative: Responsible for overseeing Project construction based on site. Reports to the Grieg NL General Manager and is responsible for:

- Ensuring compliance with relevant regulations, authorizations, permits and protocols.
- Ensuring documentation is submitted for compliance with Grieg NL policies.
- Coordinating with contractors and owners.
- Reviewing contractor documents.
- Conducting an overview of work being performed by contractors.

Grieg NL EHS Advisor: Primary Grieg NL employee responsible for overall environment, health and safety. Reports to the Grieg NL Production Manager and is responsible for:

- Performing orientations for new people on site (both visitors and workers).
- Providing environmental orientation to new employees.
- Providing awareness training on an as-needed basis.
- Ensuring that equipment is installed correctly/safely.
- Identifying potential environmental hazards.
- Determining ways of reducing EHS risks.
- Liaising with relevant authorities and contractors.
- Keeping up to date and ensuring compliance with current EHS legislation.

Contractor Project Managers: Responsible for specific scopes of work and ensuring the compliance of this specific scope. Report to the Owner Representative and are responsible for:

- Ensuring adequate resources are in place to achieve environmental commitments outlined in the contract, EPP, and any applicable permits and authorizations.
- Reviewing incident reports related to their specific work scope and employees as they are submitted and ensuring the proper management/resolution course of action is taken.
- Ensuring their scope does not impede or alter the scope or responsibilities of another contractor.

Contractor EHS Coordinator(s): Responsible for:

- Monitoring Project work to ensure that all provisions of the EPP, government approvals/authorizations and client/owner expectations are adhered to.
- Identifying any scope-specific permits not already obtained and working with the Owner Representative to ensure applications and approvals are timely.

3.2 Sustainability Policy

A key component of the Grieg NL EHS system is its sustainability policy, which is overviewed here and promoted throughout the EPP. Ultimately, Grieg NL's vision is to provide Placentia Bay Atlantic salmon for the world. Achieving this vision in a sustainable manner will be met through the company's commitment to the following principles: leadership, transparency, integrity, continuous improvement, inclusivity, and stewardship.

3.2.1 Priorities

Grieg NL's goal is the sustainable production of Atlantic salmon in the waters of Placentia Bay. Based on the expectations of Grieg NL and its stakeholders, the following priorities have been identified as key elements that are important for Grieg NL's achievements, profitability and survival with a focus on local and global sustainability:

- Fish health and welfare;
- Sea lice control;
- Fish escape control;
- Minimal emissions;
- Minimal interactions with wildlife; and
- Climate change.

3.2.2 Commitment and Scope

The sustainability policy will apply to all operations under Grieg NL. Grieg NL will utilize third-party service companies for many aspects of its operations and acknowledge that although Grieg NL cannot control the decisions of these parties, it commits to educate them of its policy. These third-party service providers will be encouraged to align their operating procedures with Grieg NL policy objectives. Grieg NL's priorities and any relevant decisions will be compliant with local, provincial and federal laws and regulations. Grieg NL will strive to exceed legal requirements with regard to sustainability, in order to be innovative and to demonstrate sustainability leadership.

3.2.3 Objectives

Grieg NL commits to:

- Focus on a safe and environmentally friendly food chain that produces quality products for consumers.
 - Strive to improve the feed conversion ratio (FCR) to a 1:1 ratio combined with optimization of fish products using the processing discards for human and other pharmaceutical or nutraceutical products.
- Balance profitable growth and innovation with environmental sustainability by using innovative technology and enhanced data collection to improve ecosystem understanding and sustainability decision-making.
 - Utilizing a RAS that requires minimal water consumption during smolt production.
 - Target to utilize fish feed that is produced using protein not designated for human consumption.
- Balance sustainable aquaculture and productive seas to maintain fish health and welfare, while also protecting the shared natural resources of the sea.
 - Utilizing sterile triploid all-female Atlantic salmon for all production in Placentia Bay.
- Providing a work environment that will attract and retain employees with a focus on health and safety, diversity, equity and integrity in the workplace.
 - Direct employment approaching 150 people in the Province upon reaching steady-state production.
- Local value creation, not only by hiring local residents, supporting local industries and utilizing third-party service contractors, but also contributing to the local communities by volunteering and donating resources.
- Publishing an annual Sustainability Report reviewing progress on achieving its goals that will be available to stakeholders and the public.

3.3 Development and Implementation of the EPP

The EPP is an essential component of Grieg NL's EHS system and is intended to ensure that all Project personnel abide by appropriate environmental protection actions, encompassing all Project phases for the RAS Hatchery. As noted earlier, this is a living document that will be revised as necessary based on review and approval of received suggestions, and to meet the requirements of reviewers and environmental approvals. EPP documents are typically revised as needed to reflect site- and/or task-specific activities as they relate to environmental protection measures and are structured to allow for revisions as Project activities progress. Separate EPP documents will be prepared for operation and decommissioning of the RAS Hatchery.

3.3.1 General Practices and Training

Grieg NL recognizes that communication and training are key to ensuring that Project activities with the potential to create a negative environmental effect are identified, and that preventative and/or mitigation measures are implemented. All Grieg NL employees, contractors, and subcontractors will undergo

employee orientation, which includes a review of environmental concerns and procedures. Additionally, multiple mechanisms are in place to ensure that the EPP contents are communicated to employees throughout the Project. A summary of these general practices is provided below.

3.3.1.1 Employee Orientation

Grieg NL recognizes the importance of EHS and is committed to ensuring a safe work environment for its employees, contractors and subcontractors, while also recognizing the importance of procedures and practices that will protect the environment. Grieg NL considers good husbandry and a strong focus on environmental protection essential during all Project phases and will emphasize this message to all new employees as part of their training and environmental orientation, and within Grieg NL's ongoing EHS management system. Grieg NL will ensure that all Project personnel, including contractors and subcontractors, are prepared and capable of completing their jobs competently and responsibly.

Grieg NL will maintain records of all environmental training and orientation sessions, including a description of the presented material, session dates and attendance. All Grieg NL personnel will receive orientation by a supervisor with awareness training. As well, on-going training will be provided on an as-needed basis.

All Project personnel working on site are required to participate in a site-specific Project and environmental orientation upon commencement of their employment and periodically thereafter as needed. This orientation will increase awareness of the Grieg NL EPP including the environmental protections relative to site-specific work activities, regulatory requirements, emergency preparedness and spill response capabilities, as well as client/contractor expectations for individual personnel roles and responsibilities.

Environmental orientation will include the following:

- Details on Grieg NL's EHS management system, EHS policy and obligations under the EPP.
- A presentation on environmental protection procedures to be applied to all work activities.
- Procedures for spill response and environmental emergencies.
- Personnel roles and responsibilities, including emergency preparedness.
- Description of tasks and activities, including any relevant activities that could involve environmental concerns.
- Instruction on specific procedures for environmental protection, including prevention, mitigation measures and documentation.
- The importance of enforcement and compliance with the EPP.

3.3.1.2 Construction Phase

During construction of the RAS Hatchery, Grieg NL has identified the following general mechanisms for dissemination of and conformance to the EPP:

- Contract documents will include a copy of the EPP for all bidders with a control copy of the EPP being issued to the successful bidder.
- Contractors will be requested to provide written confirmation that they will meet to requirements of the EPP.
- Contractors will be requested to review the specific scope for any known and potential issues that may be associated with their execution and methodology for the Project tasks.
- Where appropriate, contractors may be required to provide activity-specific EPPs at least seven days in advance of the initiation of the subject activity. This approach allows the EPP to be subdivided into smaller and more manageable and relevant documents. Submitting an EPP specific to a task, such as clearing and grubbing, closer to the point of execution optimizes complete understanding of task-specific EPP details and ensures the construction team remains focused on specific phase tasks and the EPP.
- Orientation sessions, including *New Employee*, *Project* and *Site Orientation*, will each include an “Environmental Orientation” component (see above) designed to inform employees of Project expectations with respect to individual performance on environmental issues.
 - Orientation sessions shall be provided to all employees by the EHS Advisor prior to work commencement. Hard copy records of these sessions shall be maintained on site in employee folders, along with electronic copies at the site office.
 - Site-specific issues will be covered, possibly including Species at Risk, Birds and Nests and Soils Management, among others.
- Environmental Awareness Training is Project-specific and is intended to highlight Project environmental sensitivities in appropriate detail relative to the various levels of Project involvement. A stand-alone session may be offered if required during the Project by the contractor EHS coordinator; however, environmental topics should also be embedded into daily toolbox talks, EHS meetings, progress meetings, work planning sessions, and the like. Such sessions will need to include such topics as spill prevention, incident reporting, fuelling, tank monitoring, wildlife encounters and waste management.
- *Mass EHS Meeting*: The Contractor Project Manager shall conduct a Mass EHS Meeting on a regular basis (interval to be Project Activity-specific) with staff and contractor/subcontractor representatives. The minutes will be recorded in a format suitable to the meeting or as prescribed by Project document control.
- *Weekly EHS Meetings*: These meetings shall be conducted by the immediate supervisor and periodically attended by a member of management. The minutes shall be recorded, and the attendees will sign to verify their attendance.
- *Daily Task/Toolbox Safety Meetings*: At the start of each day and the start of each new job, the supervisor shall conduct meetings relevant to the task(s) to be undertaken. The information conveyed to the crew shall include the task plan and precautions that should be taken. Meeting topics shall include: hazards (including environmental), permit reviews, site conditions, and special hazards/precautions.

3.3.1.3 Overall Operations

- *Annual Environmental Performance Review:* In order to continually improve on its performance, Grieg NL will hold annual environmental performance review meetings. Site managers, along with the Production Manager and/or General Manager, will review environmental performance and compliance at the RAS Hatchery construction site. These meetings will provide an opportunity to ensure EPP procedures as well as permitting and governmental policies are consistent.
- *Monthly/As-needed Toolbox Meetings:* The Production Manager will meet monthly or as required with site managers from the RAS Hatchery. These informal meetings will address, among other topics, Health, Safety, Environment and Security issues. These monthly meetings will provide an avenue to discuss any concerns or recent incidents.

4.0 Environmental Protection Procedures

Environmental protection procedures are provided here for each of the primary construction activities associated with the RAS Hatchery. As the work proceeds, these procedures may be modified or new procedures implemented, to account for new Project activities, site conditions, changes in engineering design or construction methods, and as a result of lessons learned during activities.

For Project activities at the RAS Hatchery, Grieg NL's civil contractor, Pennecon, as well as subcontractors will have Standard Operating Procedures (SOPs) in place, which provide step-by-step instructions for conducting various construction activities. These SOPs will also contain steps to protect the environment and which are in line with the procedures provided below. Employees, contractors and suppliers are required to follow and adhere to all environmental protection procedures. Also, as per the terms and conditions of the EIS release issued by the DMAE, Grieg NL shall adhere to all mitigation, monitoring, and commitments stated in the EIS.

As noted previously, the site for the RAS Hatchery has already been mostly cleared and grubbed. Some grubbing and leveling of the site is still required, including the removal of unsuitable material, common excavation, drilling and blasting.

4.1 Clearing, Grubbing and Removal of Related Debris

Environmental Concern

Environmental concerns include loss of habitat and potential effects of erosion and sedimentation on watercourses and the marine environment.

Environmental Protection Procedures

Though the majority of clearing and grubbing has been completed for the project, the following measures shall be implemented, as required:

1. Contractors shall adhere to current Industry Best Practices for managing erosion and sedimentation in accordance with municipal, provincial and federal regulations.
2. Clearing shall comply with the requirements of all applicable permits, including a Commercial Cutting Permit and an Operating Permit.
3. Where possible, timber shall be felled inward toward the work area to avoid damaging any standing trees within the immediate work area.
4. Clearing activities occurring during bird nesting season shall require a nest survey. No activities shall be permitted to disturb or scare away birds or wildlife.
5. Grubbing shall be contained to areas necessary for project development.
6. Grubbed material shall not be pushed into areas that are to be left undisturbed.
7. Grubbed material shall be stockpiled in a designated area.
8. A minimum 15 m buffer zone shall be maintained between grubbed areas and any adjacent watercourse, including Jones Brook and Placentia Bay.
9. Rock berms, silt fencing, and hay bales shall be used to control run-off and potential sedimentation of waterways, particularly in susceptible areas (i.e., steep slopes).

10. Sediment control structures shall be monitored, maintained, and repaired on a scheduled basis (minimum weekly) and before predicted/after actual rainfall events >25 mm.
11. Additional silt fencing and hay bales shall be stored on site and available if needed.
12. Additional measures to rehabilitate and stabilize construction sites include covering sloped areas with rip rap (clean blasted rock) or hydro seed as appropriate shall be undertaken.
13. Exposed soil and/or material stockpiles shall be placed such that the stockpiles are aligned relative to prevailing winds and dust control/suppression is implemented as required.
14. Any areas to be restored after construction is complete shall be covered with topsoil and sodded or hydro seeded.
15. There shall be no disruption of shoreline areas or requirement to construct access roads.

4.2 Storage, Transportation, Transfer, Handling and Disposal of Fuel and Other Hazardous Substances

Environmental Concern

During construction, some substances will be used which are or may be classified as hazardous including petroleum, oil and lubricants; chlorinated and non-chlorinated solvents (e.g., cleaner-degreasers); waste petroleum products (e.g., used engine/motor oil); glycol (e.g., antifreeze), paints, epoxies, concrete additives, and explosives. The primary concern regarding the use and storage of fuel or other hazardous materials is an uncontrolled or accidental release into the environment and subsequent negative effects on terrestrial and aquatic habitat and species, soil, surface and groundwater quality and human health and safety.

Environmental Protection Procedures

The following procedures will be implemented to reduce the likelihood of accidental release of hazardous substances that may result in negative environmental effects:

1. Procedures for the handling of fuels and other hazardous materials as well as contingency plans for spills will be present in hard copy at receiving, storage, transfer and disposal areas.
2. Contractors will be required to submit a detailed EPP prior to the start of construction including Material Safety Data Sheets (MSDS) of all hazardous products.
3. Any soil contaminated by small leaks of fuel, oil or grease from equipment shall be cleaned up and disposed of in accordance with the applicable regulations, under the provincial *Environmental Protection Act* (2006) and Used Oil Control Regulation (82/02). The Used Oil Control Regulation (82/02) will be used as a guideline to the DMAE requirements for such disposal.
4. Smoking shall be permitted in designated areas only. Designated smoking areas shall not be within 10 m of fuel or hazardous material storage areas.
5. A complete inventory of the hazardous materials on the job site shall be maintained according to the Workplace Hazardous Materials Information System (WHMIS) Regulations and will be made available to regulatory agencies upon request or in case of any emergency.
6. All subcontractors and Grieg NL employees shall be required to observe strict compliance with the requirements of WHMIS regarding employee training, use, handling, storage, and

disposal of hazardous materials and regarding labeling and provision of MSDS, as required by WHMIS legislation.

7. Tanks shall be located in areas where spills, should they occur, shall not flow to watercourses, water bodies, ditches or the marine environment.
8. If fuel tanks are required to be stored on site during construction, these shall be located on concrete pads surrounded by a containment barrier to prevent spills to the environment as described in section 27 – Construction and Installation Standards of *Storage and Handling of Gasoline and Associated Products Regulations, 2003*. Tanks for fuels and other hazardous materials shall be self-dyked or be positioned over an impervious mat, surrounded by an impervious dyke of sufficient height, more specifically:
 - a. Where a dyked area contains only one storage tank, the dyked area will retain not less than 110% of the capacity of the tank; and
 - b. Where a dyked area contains more than one storage tank, the dyked area will retain not less than 110% of the capacity of the largest tank or 100% of the capacity of the largest tank plus 10% of the aggregate capacity of all the other tanks, whichever is greater.
9. All storage facilities shall be located away from construction activities, provided with secondary containment, and inspected on a regular basis in compliance with all government laws and regulations.
10. As per the required operations permit and relevant legislation for drilling and blasting during the construction phase, explosives shall not be stored or remain on site overnight.
11. Oils, grease, gasoline, diesel or other fuels or any material deemed to be hazardous shall be stored at least 100 m from any watercourse or the ocean.
12. Fuel and other hazardous materials storage areas and non-portable transfer lines shall be clearly marked or barricaded to protect against damage by moving vehicles. The markers will be visible under all weather conditions. Barriers shall be constructed in compliance with the provincial *Storage and Handling of Gasoline and Associated Product Regulations (58/03)*.
13. Hazardous materials shall be properly labelled and stored in an appropriate storage cabinet, cupboard or designated area.
14. Containers containing hazardous materials shall be appropriate for the material being stored and shall always be kept sealed when not in use.
15. The transportation, use and storage of fuel and other hazardous materials is regulated by The *Storage and Handling of Gasoline and Associated Products (GAP) Regulations and Amendments, Transportation of Dangerous Goods Act (1992)* and *Dangerous Goods Transportation Act (2006)*. Employees and contractors shall follow all required regulatory policies and procedures.
16. Diesel fuel tanks for the hatchery backup generator system will be installed with guidance from Service NL to register these tanks and receive instructions from an Environmental Protection Officer as to which contingency plan documents are required.
17. Hazardous Storage Areas shall be equipped with appropriate firefighting equipment.
18. All Occupation Health and Safety regulations regarding the use, storage and training on all classes of fire extinguishers that may be required shall be followed.
19. Waste oils, lubricants and other used oil shall be retained in a tank or closed container and shall be disposed of regularly under contract with a licensed used oil collector in accordance with the *Used Oil Control Regulations (82/02)*.

20. Greasy or oily rags or other materials at risk of spontaneous combustion shall be deposited and stored in appropriate receptacles. This material shall be removed from the work site on a regular basis and shall be disposed of in an approved existing waste disposal facility. Removal of these materials from the job site is regulated under the *Transportation of Dangerous Goods Act*.
21. All hazardous materials shall be handled according to the provincial *Environmental Protection Act* (2006) and disposed of in accordance with government laws and regulations at an approved off-site hazardous waste disposal facility.
22. Regular inspections of hydraulic and fuel systems on machinery shall be performed, and all leaks shall be repaired immediately upon detection. Worn or damaged hoses, seals and fittings shall be promptly repaired or replaced.
23. Fuelling, routine maintenance activities, and lubrication of vehicles and mobile equipment shall be performed in designated and approved locations. Fuelling and lubrication of equipment shall occur in such a manner as to minimize the possibility of contamination to soil or water. All activities shall be performed with appropriate spill protection measures.
24. Fuelling or servicing of mobile equipment shall not be allowed within 30 m of water bodies, drainage systems or ecologically sensitive areas. For equipment of limited mobility where the 30 m buffer zone cannot be practically achieved, adequate spill containment shall be provided during the fueling and servicing operations. Fuelling and servicing of equipment shall occur on level terrain.
25. All deliveries of fuel shall be in conventional fuel delivery trucks that are operated by licensed distributors.
26. When fuelling equipment, operators shall:
 - a. Be in attendance for the duration of the operation;
 - b. Use leak-free containers and reinforced rip and puncture-proof hoses and nozzles;
 - c. Use hoses that have a design pressure rating of at least 150% of the maximum head of the system;
 - d. Lock out all tank nozzle valves except the valve currently in use;
 - e. Seal all storage container outlets except the outlet currently in use; and
 - f. Ensure drip pans, and other precautionary measures as required, are in place prior to the start of refueling activities.
27. Fuel unloading facilities shall be equipped with drip pans to collect hose drainage and drips. Hoses or pipes used for fuel transfer shall be equipped with properly functioning and approved check valves, spaced to prevent backflow of fuel in the case of failures.
28. All necessary precautions shall be implemented to prevent the spillage, misplacement, and loss of fuels and other hazardous materials used during the construction phase.
29. A fuel and other hazardous materials spill contingency plan, and appropriate emergency spill equipment, shall be in place on site.
30. All spills of fuel and hazardous materials shall be reported immediately to the EHS Advisor. Any spill of any volume to the marine environment or spills of 70 L or more on land shall be reported immediately in accordance with provincial regulation.
31. Any spill on land regardless of size that may enter a waterbody frequented by fish shall be reported immediately to Canadian Coast Guard Environmental Emergencies: (709) 772-2083 or 1-800-563-9089, as required by the *Fisheries Act* and Section 201 of *Canadian*

Environmental Protection Act (CEPA). All such spills shall also be reported immediately to the EHS Advisor and Production Manager.

32. Spill kits shall be maintained at the construction site for quick response purposes.
33. All selected response equipment shall be selected for its suitability/acceptability for deployment.
34. All employees and contractors shall be made aware of the Spill Management Plan and their role.
35. All petroleum-based products used in the facility during construction and operation including oils, fuels, and greases shall be reused when possible (e.g., waste oil can be collected and burned).
36. When possible, environmentally friendly options shall be used (e.g., food grade grease/oil).
37. Reduce the use of products such as paints and only paint areas as needed. Unused paint shall be recycled when possible or disposed of at an approved waste disposal area.

4.3 Blasting

Environmental Concern

Drilling and blasting are required to bring the site for the RAS Hatchery to specific grades/levels. Potential impacts include destruction of vegetation, noise disturbances to wildlife, and the potential effects on fish, aquatic animals, and residents in adjacent areas.

Environmental Protection Procedures

1. All blasting work shall be conducted in compliance with the appropriate permits and/or approvals and authorizations.
2. The handling, transportation, storage and use of explosives shall be conducted in compliance with all applicable laws, regulations, orders of the Newfoundland and Labrador Department of Government Services (NLDGS) and Newfoundland and Labrador Department of Natural Resources (NLDNR), and the *Dangerous Goods Transportation Act* (2006).
3. All personnel shall comply with site-approved safe blasting procedures.
4. Blasting activities shall be coordinated and scheduled to minimize the number of blasts required. In order to minimize the seismic effect, blasting patterns and procedures shall be used to reduce the shock wave and noise.
5. Blasting shall not occur in the vicinity of fuel storage facilities.
6. Use of explosives shall be restricted to authorized personnel who have been trained in their use. Licensed blasters shall undertake blasting.
7. Explosives and auxiliary materials shall be stored as stipulated in relevant legislation, in compliance with all permits.
8. Explosives shall be used in a manner that will minimize damage or defacement of landscape features, trees and other surrounding objects by controlling, through the best methods possible (including time-delay blast cycles), the scatter of blasted material beyond the limits of activity.
9. Pre-blast surveys shall be conducted for wildlife and, if wildlife is encountered in the area, the blast will be delayed until the wildlife is no longer present.

10. A blast site safety manual shall be required from the licensed contractor, a key aspect of which will include a blasting warning protocol (i.e., horns and/or sirens).
11. Blasting in close proximity to adjacent watercourses, including Jones Brook and Placentia Bay, shall follow the *Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters* (Wright and Hopky 1998; Appendix A).

4.4 Concrete Handling and Placing

Environmental Concern

Typical of industrial construction, large quantities of concrete shall be utilized during the construction phase of the RAS Hatchery. The production of concrete involves the use of cement, concrete additives, reaction agents and aggregates. Cement is highly alkaline and wash water (e.g., from spoiled concrete or cleaning mixers and mixer trucks) will have a high pH and will contain additives and agents, some of which are toxic to terrestrial and aquatic species. Of concern is the potential of fresh concrete or concrete products to affect the environment, such as released wash water increasing pH or chemical levels in local water sources to potentially toxic levels.

Environmental Protection Procedures

Grieg NL shall implement the following environmental protection procedures for the use of fresh concrete near bodies of water:

1. The batch plant providing concrete (i.e., a third-party provider) shall comply with the NL Environmental Code of Practice for Concrete Batch Plant (Ready Mix Plant) Operations and Rock Washing Operations, 1992, as well as all applicable authorizations and guidelines.
2. A third-party inspection will be utilized to ensure the contracted batch plant is performing to all required codes and standards.
3. Concrete delivery trucks or chutes shall not be washed within 100 m of any watercourse or waterbody.
4. When concrete is to be placed within 15 m of a waterbody, provisions of all required permits shall be followed. Under no circumstances shall fresh concrete come into contact with a waterbody before the concrete has cured.
5. Washwater from the cleaning of mixers, mixer trucks and concrete delivery systems shall be handled using the procedures outlined in Section 3.0 of the NL Environmental Code of Practice for Concrete Batch Plant and Rock Washing Operations. The following outlines important steps to take, however the code of practice shall be reviewed thoroughly:
 - a. All rinsing activities shall be carried out at the site of the concrete batch plant, except rinsing of the chute and concrete delivery systems;
 - b. The rinsing of the chute may be carried out at the delivery site, but care and caution shall be taken. It is permissible to rinse onto the ground or soil but under no circumstances into a pond or stream or onto a surface that leads directly to a water body, such as a storm sewer. A washout area shall be provided.
 - c. A qualified third-party responsible for reporting non-conformances to DMAE will be hired.

6. All necessary precautions shall be taken when handling related substances such as form coatings and concrete admixtures to prevent any spill or leakage of these substances.
7. All spills are to be captured and shall be handled as described in Section 4.1.2.
8. All spills over the minimum reporting volumes shall be reported to DMAE within the prescribed time frame.

4.5 Storage, Handling, and Disposal of Solid Waste

Environmental Concern

The release of solid waste is a concern to human health, drinking water quality, aquatic and terrestrial ecosystems.

Solid waste (e.g., domestic waste, paper, cardboard, wood, metals, etc.) will be generated during construction activities. These wastes, if not properly controlled and handled, will be unsightly and may cause human safety and health concerns. Uncontrolled waste may also attract wildlife leading to potential human-wildlife encounters.

Environmental Protection Procedures

1. The amount of waste generated and requiring disposal shall be minimized as much as possible.
2. All wastes shall be handled according to procedures in Grieg NL's Waste Management Plan and in compliance with all relevant regulations.
3. By using pre-fab buildings, only the necessary amount of materials required for building construction will be sent to the construction site, and there will be minimal waste associated with cutting materials or workmanship errors.
4. Fiber rebar (i.e., basalt fiber reinforced polymer) will be considered for use in concrete reinforcement to reduce steel waste with excess fiber rebar being chipped for compaction and disposal.
5. A refuse wood site shall be identified for local use for disposal of wood pallets and other excess wood materials.
6. Wood products shall be chipped for disposal whenever possible.
7. Scrap steel and plastic products such as piping will be retained by Grieg NL for use in facility repairs.
8. Where this is not practical due to materials being damaged or too small, steel products will be recycled through local companies.
9. Plastic products shall be recycled where possible with disposal only when no other option remains.
10. On site waste shall be disposed in accordance with the Burin Peninsula Waste Management Corporation (BPWMC).

4.6 Sewage Disposal

Environmental Concern

The release of untreated sewage may pose risks and/or concerns to human health, drinking water quality and marine and freshwater ecosystems.

Before the RAS Hatchery is constructed and the facility is tied into the existing BMS Blivet waste water treatment system in the Marystown Marine Industrial Park, temporary portable toilets may be on site, or temporary office facilities may be constructed that tie into the Blivet system. This will be decided by contractors after contracts are awarded.

Environmental Protection Procedures

1. Until such time as the contractor can tie into the Blivet system, sewage shall be handled by temporary portable toilets or washcars located around the construction site and will comply with all health and safety regulations, the Department of Health guidelines, the *Environmental Protection Act* (2006), and Environmental Control Water and Sewage Regulations, 2003 (65/03).
2. Sewage waste shall be trucked off-site by a licensed waste management firm for treatment and disposal.

4.7 Vehicular Traffic

Environmental Concern

Lots within the Marystown Marine Industrial Park are currently serviced with a paved access road. There will be no construction of access roads. Vehicular traffic will be typical of industrial construction projects in the province during the construction phase of the RAS Hatchery. Proposed construction activities will be supported by vehicles ranging in size from light trucks to heavy equipment, all of which can result in direct physical disturbances that can impact air quality and terrestrial and aquatic environments.

Environmental Protection Procedures

1. No anticipated requirement for all-terrain vehicle (ATV); if requirement arises, the use of ATVs shall be restricted to designated roadways and/or areas to minimize ground disturbance.
2. Heavy equipment shall be minimized near waterbodies. Heavy equipment use shall be restricted from performing work in the nearby brook.
3. Reasonable speed limits shall be posted to reduce potential environmental impacts and vehicular accidents.
4. Inspection and maintenance of all project vehicles shall be performed on a daily/weekly schedule to ensure they are in good working order. Inspections and maintenance shall include but not limited to exhaust systems, mufflers and any other pollution control devices in order to ensure emissions remain within acceptable standards.

5. Construction vehicular traffic shall not travel outside designated work areas.
6. Public roads shall be inspected on a regular basis with the local road authority. Repairs and/or clean-up shall be discussed and agreed to with the local road authority.

4.8 Dust Control

Environmental Concern

Excessive dust may be generated during dry conditions, which may pose environmental concerns related to human health, terrestrial vegetation, and marine and freshwater environments.

Environmental Protection Procedures

In order to maintain appropriate air quality and prevent smothering or other undue environmental effects, the following procedures will be implemented, as appropriate:

1. Freshwater shall be used as the primary measure to control dust. Application will be via water truck with sprinkler.
2. If necessary, using other agents, such as calcium chloride shall be used to control dust in accordance with applicable guidelines. No petroleum-based products shall be used for dust control.
3. All dust control agents shall be stored away from water bodies.
4. Dust emissions shall be reduced to the greatest extent possible.
5. No dust control shall be applied if weather conditions indicate a potential for freezing and creating traffic hazards.
6. Local road authorities shall be consulted prior to applying dust control measures on public roads.
7. A vehicle/tire wash/wet area shall be provided to control dirt and dust on public roadways.
8. Weather forecasts/conditions shall be monitored to ensure adequate dust control measures are implemented.

4.9 Equipment Use and Maintenance

Environmental Concern

Environmental concerns associated with the operation and use of construction equipment include atmospheric emissions, noise, accidental spills and chronic leaks. Emissions, spills and direct physical disturbances as a result of equipment can adversely affect surrounding resources.

Environmental Protection Procedures

1. All Project-related equipment must be clean and in good working order when delivered for construction activities.
2. All efforts must be made to avoid the discharge of oils, fuels or other such compounds from equipment to the surrounding environment.

3. Equipment including generators and vehicles shall be inspected and serviced routinely for mechanical condition and to ensure there are no leaks that could result in spills of hazardous materials.
4. Equipment inspections and maintenance shall be conducted by qualified personnel.
5. Pipes, hoses and connections for equipment shall be inspected routinely for breaches or defects.
6. Leaks, breaks, or compromised hoses, pipes and connectors shall be repaired and reported immediately.
7. Spill kits shall be maintained on site. Each piece of equipment shall have a portable spill kit on board. In addition, drum spill kits shall be strategically located near working areas. All deliveries of fuel shall be in conventional fuel delivery trucks that are operated by licensed distributors.
8. Records shall be maintained on file for all inspections and maintenance servicing.

4.10 Protection of Migratory Birds

Environmental Concern

Migratory birds, their eggs, nests, and young are protected under the *Migratory Birds Convention Act (MBCA)*. Migratory birds protected by the *MBCA* generally include all seabirds except cormorants and pelicans, all waterfowl, all shorebirds, and most landbirds (birds with principally terrestrial life cycles).

Under Section 6 of the *Migratory Birds Regulations (MBR)*, it is forbidden to disturb, destroy or take a nest or egg of a migratory bird or to be in possession of a live migratory bird, or its carcass, skin, nest or egg, except under authority of a permit. It is important to note that under the current MBR, no permits can be issued for the incidental take of migratory birds caused by development projects or other economic activities.

Furthermore, Section 5.1 of the *MBCA* describes prohibitions related to deposit of substances harmful to migratory birds:

5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.

(2) No person or vessel shall deposit a substance or permit a substance to be deposited in any place if the substance, in combination with one or more substances, results in a substance — in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area — that is harmful to migratory birds."

Environmental Protection Procedures

The following procedures shall be put into place to ensure that the Project does not pose a threat to migratory birds:

1. No one shall approach concentrations of seabirds, sea ducks or shorebirds that may occur at the construction site or adjacent to the site.
2. Care shall be taken to ensure that food scraps and other garbage are properly disposed of to avoid attraction of potential predators to migratory birds.
3. During the breeding bird season, visual monitoring for nesting activity within the construction area will be conducted.
4. No one shall disturb, move, or destroy migratory bird nests. If a nest or young birds are encountered, work will cease in the immediate area of the nest. Work shall not continue in the area until the nest is no longer occupied, otherwise the work plan shall be modified to avoid nest sites.
5. Personal pets shall not be brought to the construction site.
6. Buffers shall be established around known nests (species-specific); however, staff and crew shall be made aware of the possibility of undiscovered nests. When one or more of the indicators below are noted, notifications shall be made as appropriate. An active nest can be identified by:
 - a. the presence of birds or eggs in a nest;
 - b. adult birds carrying food or nesting materials to a specific location; or
 - c. adult birds defending territory, through singing, screeching or diving.
7. All precautions shall be taken to prevent fuel leaks from equipment. Staff and crew are aware that under the MBR, “no person shall deposit or permit to be deposited oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds”.
8. While there is no expectation of nighttime activities, should that requirement change the following measures shall be implemented:
 - a. The use of solid-burning or slow pulsing warning lights at night shall be avoided;
 - b. Lighting for the safety of the employees shall be shielded to shine down and only to where it is needed, without compromising safety; and
 - c. The minimum number of lights possible shall be used, while still ensuring the safety of crews working at night.

5.0 Contingency Plans

Contingency plans to address incidents and unplanned situations that may occur during the construction of the RAS Hatchery have been developed and will be modified as required. Grieg NL has developed a separate Emergency Response Plan that details procedures for personnel health and safety and response to accidents, malfunctions, and emergencies. Grieg NL has also developed a Spill Management Plan. These documents are the first point of reference for emergency responders in case of an emergency on site. Information provided in this section is meant to support the Emergency Response and Spill Management Plans and be available as an additional reference.

The following contingency plans have been developed to address accidental and unplanned situations that may occur during the construction phase at the RAS Hatchery:

- Fuel and Hazardous Materials Spills
- Forest Fires
- Wildlife Encounters
- Extreme Weather Events
- Discovery of Historic Resources
- Discovery of a Species At Risk

Notwithstanding these contingency plans, Grieg NL supports preventative measures as the first line of defence against the possibility of incidents.

5.1 Fuel or Hazardous Material Spills

The civil contractor, Pennecon in consultation with Grieg NL will lead and coordinate any field response to environmental incidents related to their activities. During construction of the RAS Hatchery, it is anticipated that spilled material will be primarily fuel, lube, and hydraulic fluid originating from equipment wear and tear and/or malfunction. Therefore, in the event of a spill, procedures for responding to hydrocarbon spills outlined herein, shall apply:

1. Assess the situation (Safety First). Personnel shall not approach the spill area without appropriate PPE.
2. Identify priorities while considering the threat to people, property, and the environment.
3. Initiate the appropriate response actions:
 - The individual who discovers the leak or spill shall make a reasonable attempt to immediately stop the leakage and contain the flow, where safe to do so.
 - Contact emergency personnel and request additional support if necessary.
 - Reporting: spill location, type of product, estimated volume and terrain condition at the spill site will be determined and reported immediately to Grieg NL's EHS Advisor for further reporting to authorities, as appropriate.
 - Initiate the containment and recovery of any free product and/or contaminated material.

4. Dispose of all waste material in the appropriate manner.
5. Restore the site to the satisfaction of the Project representative or governing regulatory body.
6. Document and investigate as required.

Reportable spills include:

- A spill or leak greater than 70 L on land;
- A spill or leak on land, regardless of quantity, that has the potential to contaminate nearby property or enter a water body or sewer;
- Spills or leaks from storage tanks; or
- A spill or leak in the water, regardless of quantity.

Spills meeting the above criteria shall be reported immediately to regulatory authorities via the **Environmental Emergency Report Line at (709) 772-2083 or 1-800-563-9089**.

In reaching decisions on containment and clean-up procedures, the following criteria will be applied:

- Minimize danger to persons;
- Minimize pollution of water courses;
- Minimize area affected by spill; and
- Minimize the degree of disturbance to the area and watercourses during cleanup.

Grieg NL and its subcontractors will take all necessary precautions to prevent a reoccurrence of the incident and the EHS Advisor shall prepare a written report as required.

All fuel-powered equipment shall contain appropriately-sized spill kits (23 L). In addition, 45 gallon drum spill kits shall be strategically placed throughout the site and moved as required. In addition, a sea-can clearly marked as “Spill Response Equipment” shall be located in the lay down area. The contents of spill kits shall be routinely inspected and supplies replenished as necessary.

In the event of fuel or hazardous material spills, Project personnel are also to refer to Grieg NL’s Spill Management Plan: Land and Water, and emergency contact phone numbers (first page [i]) and section 4.0, *Emergency Response*, of Grieg NL’s Emergency Response Plan.

5.2 Forest Fires

A fire at the construction site has the potential to spread to the surrounding area. Conversely, a forest fire or fire at another facility within the Marystown Marine Industrial Park could spread to the RAS Hatchery site. Terrestrial fires could result in habitat alteration or loss and/or mortality of wildlife. Fire fighting chemicals or spilled materials associated with fires could enter freshwater or marine environments, potentially negatively affecting habitat and biota, particularly if permitted to disperse and persist. Fires may also adversely affect air quality and pose risks to human health and safety.

Grieg NL shall take all necessary precautions to prevent fire hazards when working at the site, including, but not limited to, the following:

- Adhering to appropriate permits, including operating permits.
- Storing, handling and disposing of flammable materials and waste appropriately and in accordance with appropriate regulations.
- Smoking in designated areas only.
- Ensuring all fire extinguishers are marked and easily accessible to anyone who may need to use them.

If a fire is encountered, the following protocol shall be followed:

- The individual who discovers the fire shall raise the alarm to alert all on-site personnel.
- Immediately stopping work and controlling all sources of further ignition.
- Personnel trained in fire-fighting and the use of appropriate equipment shall take immediate steps to contain or extinguish the fire.
- Fires shall be reported immediately to the EHS Advisor, Marystown Fire Department, and the nearest Forest Management Unit office for further reporting to the local authorities. The following information shall be provided:
 - name and telephone number
 - time of detection
 - size of fire
 - location of fire
 - weather conditions (rain, sun, wind direction and speed, etc.)
- Follow the appropriate route to the construction site muster station.

Personnel are also referred to Section 7.1, *Fire Emergency Plan (Land-based RAS Hatchery)* of Grieg NL's Emergency Response Plan for fire prevention and response actions.

5.3 Wildlife Encounters

Wildlife encounters pose a potential risk for stress or injury to both the wildlife and site personnel. To reduce the risk to both wildlife and site personnel, the following measures will be implemented:

- Hunting, trapping or fishing by Project personnel is not permitted on site.
- Site and working areas shall be kept clean of food scraps and garbage.
- Wildlife protected disposal containers will be used and will be regularly emptied and transferred to the local landfill.
- No personal pets, domestic or wild, will be allowed on the site.

In addition to the above protection measures, the following protocol will be followed in the event of a wildlife encounter:

- Workers shall not attempt to chase, catch, divert, follow or otherwise harass wildlife by vehicle or on foot.
- Equipment and vehicles shall yield the right-of-way to wildlife.
- Wildlife sightings or encounters shall be reported to the EHS Advisor. All actions in response to nuisance animals shall be the responsibility of Grieg NL.

- If the nest of any bird is encountered during construction activities, work around the nest will be immediately stopped and the EHS Advisor notified.
- Any incidents that result in the displacement or killing of wildlife shall be reported to EHS Advisor, complete with details on the incident and the names (and contact information) of the persons involved, for reporting as required.

5.4 Extreme Weather Events

Extreme weather events, such as severe winter storms, hurricanes or post-tropical storms, can bring strong winds, heavy snow, rain or freezing rain, flooding, high waves or ice. Such events can disrupt unsecured construction materials or equipment, or damage buildings. In anticipation of an extreme weather event, precautionary measures to prevent negative impacts to the environment include:

- Securing loose materials, coverings and containers, including waste containers.
- If applicable, appropriately collecting and disposing/storing product from equipment drip pans or tank dyke pads and ensuring drainage equipment is in good condition and clear of debris, snow or ice.
- Checking that sedimentation control structures are secure and in good working order, and capable of handling anticipated flow.

Immediately following an extreme weather event, all on-site environmental protective measures will be checked. Any required repairs will be completed as soon as conditions allow, before any work occurs utilizing the equipment to be repaired/replaced.

5.5 Discovery of Historic Resources

Historic resource material that is disturbed, destroyed, or improperly removed from the construction site represents a cultural loss of information and history that could otherwise be handled and interpreted in an appropriate manner.

In the unlikely event evidence of an archaeological item/site is discovered during construction activities, the following measures will be taken:

- All work in the immediate area of the discovery shall be stopped until authorized personnel (EHS Advisor) consult with the Provincial Archaeologist and permission has been received to resume work.
- Report the find immediately to the EHS Advisor.
- Mark the site's visible boundaries. Personnel will not move or remove any artifacts or associated material unless advised to do so by the Provincial Archaeology Office.
- Grieg NL will report the find with the following information to the Provincial Archaeology Office, Culture and Heritage Division, Department of Tourism, Culture, and Recreation, St. John's, and comply with the instruction provided:
 - nature of the find;
 - precise descriptive and map location and the time of the find;
 - nature of the activity resulting in the find;

- identity of the person(s) making the find;
- present location of the material and any protective measures initiated for the material and the site; and,
- any extenuating circumstances.

5.6 Discovery of a Species at Risk

The following species at risk (as listed on Schedule 1 of the *Species at Risk Act [SARA]*) may occur within the RAS Hatchery site: Red Crossbill (Endangered), Olive-sided Flycatcher (Threatened), Peregrine Falcon (Special Concern), and Rusty Blackbird (Special Concern). Though unlikely to be found within the RAS Hatchery site, which has already been mostly cleared, these species may occur within the general area.

The construction of the Project may affect Species at Risk and their habitat. Since these species are extremely sensitive to habitat degradation the following measures will be put into place to ensure that the Project does not pose a threat to their population's survival:

- All personnel working on site will adhere to all stipulations set out in the *SARA*, and will be informed that it is illegal to kill, harass, capture or harm any species listed under it; and
- If a Species at Risk, as listed above or otherwise, is discovered, all work in proximity to the location will cease and it will be reported to the EHS Advisor who will then contact ECCC-CWS for further action.

6.0 Legislation, Permits and Authorizations

Grieg NL has identified the various legislation, permits and authorizations to which the company subscribes related to the Project's environmental aspects—see below.

6.1 Legislation

Relevant legislation for the construction of the RAS Hatchery component of the Project includes the following:

- *Transportation of Dangerous Goods Act*
- *Migratory Birds Convention Act*
- *Aquaculture Act*
- *Lands Act*
- *Environmental Protection Act*
- *Urban and Rural Planning Act*
- *Water Resources Act*
- *Occupational Health and Safety Act*
- *Buildings Accessibility Act*
- *Public Safety Act*
- *Fire Prevention Act*
- *Species at Risk Act*
- *Fisheries Act*
- Aquaculture Activities Regulations (AAR)
- Town of Marystown Development Regulations

6.2 Permits and Authorizations

In Canada, the aquaculture industry is regulated and managed by both the federal and provincial governments. Grieg NL is required to adhere to these regulations. The Project must also comply with provincial and municipal regulations related to the construction of the RAS Hatchery. A list of required key permits and approvals is provided in Table 6.1. Grieg NL's civil contractor, Pennecon in a joint-effort with Grieg NL, will house and manage permits and authorizations in dedicated software (i.e., *Intelix*, business intelligence software).

Table 6.1. Anticipated federal, provincial and municipal approvals and permits for the construction phase of the RAS Hatchery.

Permit, License or Regulatory Approval	Activity Requiring Approval	Legislation	Regulatory Agency Responsible	Status
Government of Canada				
As per Transport Canada Regulations ^a	Transportation of explosives	<i>Transportation of Dangerous Goods Act</i>	Transport Canada	In progress
Migratory Bird Permit	Any activities that could cause mortality, disturbance or require relocation of migratory birds	<i>Migratory Birds Convention Act</i>	ECCC-CWS	To be determined
Government of Newfoundland and Labrador				
Aquaculture Licence	Any aquaculture activities	<i>Aquaculture Act</i>	DFLR	In progress
Application for Crown Land Title	Leasing of land for the land-based facility	<i>Lands Act</i>	DFLR	Completed
Certificate of Approval for Construction of Commercial Plant	Construction of the land-based facility	<i>Environmental Protection Act</i>	DMAE	In progress
Development Certificate	Construction and operation of the land-based facility	<i>Urban and Rural Planning Act</i>	DMAE	In progress
Application for Permit Water and Sewage Works	Obtaining/discharging water for use in construction and operation of the land-based facility	<i>Water Resources Act</i>	DMAE	In progress
Permit for Flammable and Combustible Liquid Storage	Storage of flammable and combustible liquids	<i>Environmental Protection Act</i>	DMAE	In progress
As per Occupational Health and Safety Regulations ^a	Blasting at hatchery site	<i>Occupational Health and Safety Act</i>	Service NL	In progress
Notification to Minister of OH&S of start of construction for any project over 30 days duration	Construction of the land-based facility, including blasting	<i>Occupational Health and Safety Act</i>	Service NL	Obtained
Building Accessibility Exemption Registration	Construction of the land-based facility	<i>Buildings Accessibility Act</i>	Service NL	In progress
Fire Commissioners Approval under the National Building / Fire / Life Safety Code	Construction of any buildings		Service NL	In progress
Used Oil Storage Tank System	Storage and Handling of Petroleum Products	<i>Environmental Protection Act and Fire Prevention Act</i>	Service NL	In progress
Electrical Permit	All electrical wiring and infrastructure installation	<i>Public Safety Act</i>	Service NL	To be determined
Certificate of Plant Registration for Power, Heat, Refrigeration, Compressed Gas or Combined Plant	Various project related activities		Service NL	To be determined
Municipal Government				
Construction Permit	Permits must be in place for any development of the land-based facility	Town of Marystown Development Regulations	Marystown Municipal Government	In progress
Compliance with Marystown Municipal Plan	Permits must be in place for any development of the land-based facility	Town of Marystown Development Regulations	Marystown Municipal Government	In progress

Note: ^a The contractor conducting the blasting will be responsible for ensuring these regulations are followed.

7.0 Contact List

Contact lists will be posted in central, visible locations at the RAS Hatchery construction site. The lists will be kept up to date, and all contacts on the lists will be made aware of their expected role(s) during routine and/or emergency situations.

7.1 Emergency Numbers

Contact information that may be utilized during an emergency is provided in Table 7.1.

Table 7.1. Emergency contact phone numbers for the Project.

Title	Number
Emergency Personnel	911
Marystown Ambulance	709-279-2121
Marystown Fire Department	709-279-1333
Burin Peninsula Health Care	709-891-1040
Marystown Police	709-279-3001
Poison Control	1-866-727-1110
Search and Rescue	1-800-563-2444
Canadian Coast Guard	709-772-4423
Marine Pollution	1-800-563-9089
Emergency Response Organization	TBD
Marine Communication and Transport Center, Placentia	709-227-2181
Marine Mammal in Distress	1-888-895-3003
Poaching and Fisheries Violations	1-800-222-8477
Department Fisheries and Land	709-292-4111
Department Fisheries and Oceans	709-772-5202
Invasive Aquatic Species	1-888-435-4040

7.2 Advisory and Other Contact Numbers

Contact information for appropriate Grieg NL and other advisory personnel are provided in Table 7.2. These designated personnel can be reached at any time, in accordance with established communications protocols.

Table 7.2. Advisory and other contact numbers for the Construction of the RAS Hatchery.

Title	Name	Number
Grieg NL General Manager		TBD
Grieg NL Production Manager		TBD
Grieg NL EHS Advisor		TBD
EHS Project Consultant		TBD
Owner Representative		TBD
Site Security and Emergency Services		TBD
Contractor Project Manager	TBD	TBD
Contractor EHS Coordinator	TBD	TBD

8.0 Resource Material

Information documents relevant to the Project were included as appendices to the EIS. Copies of the EIS and associated documents can be found at Grieg NL's office in Marystown and at public libraries in Marystown (as well as Corner Brook and St. John's).

8.1 Key Reference Material

Environmental documents previously completed for the Project and relevant to the RAS Hatchery are listed in Table 8.1. Personnel are also referred to further documentation included as appendices to and referenced throughout this EPP.

Table 8.1. Key Project reference material relevant to environmental protection measures, for construction of the RAS Hatchery. Material was provided as appendices to the Project EIS (LGL Limited 2018).

Document Name and Author	Summary	Release Date
Emergency Response Plan Grieg NL	Details the emergency procedures to be implemented in response to any situation that may endanger the safety and/or health of people; the environment; property and/or equipment.	May 2018
Spill Management Plan: Land and Water Grieg NL	Details the emergency procedures to be implemented in response to a spill that may endanger the safety and/or health of people; the environment; property and/or equipment.	May 2018
Waste Management Plan Grieg NL	Details the procedures to be implemented to manage waste associated with the Project including waste generated during construction of the RAS Hatchery.	May 2018
The Cultural, Recreational and Commercial Importance of the Waters of Placentia Bay Component Study Grattan et al. 2018	Provides a detailed description of the cultural, recreational and commercial usage of Placentia Bay. It focuses on fisheries, tourism, recreational activities, marine navigation, and culturally and ecologically important areas. The study also includes mitigation measures that will be undertaken to protect these uses and areas from the potential effects of the Project, as well as follow-up monitoring.	May 2018
Wild Atlantic Salmon Component Study LGL Limited 2018	Provides a review of wild Atlantic salmon with a focus on the salmon that occur in Placentia Bay. It also reviews the potential genetic and ecological interactions between wild and farmed salmon and the mitigation measures and follow-up monitoring intended to minimize the potential effects of Grieg NL's Project.	May 2018
Fish and Fish Habitat Component Study LGL Limited 2018	Provides a review of the existing fish and fish habitat in Placentia Bay with focus on the sea cage sites, the mitigation measures intended to minimize the potential effects of the proposed Project on fish and fish habitat, and the follow-up monitoring intended to validate the effects conclusions in the EIS.	May 2018
Sustainability Report 2017 Grieg Seafood	Defines Grieg's five essential principles for sustainable food production in the ocean and introduces a greenhouse gas account which maps emissions from Grieg Seafood as an organization.	April 2018
Bird Survey – Bird Nest Search of the Marystown RAS Hatchery Site LGL Ltd.	Reports on a search conducted for active bird nests at an area designated for clearing as part of the development of the RAS Hatchery.	July 2017

9.0 Literature Cited

LGL Limited. 2018. Environmental Impact Statement of the Placentia Bay Atlantic Salmon Aquaculture Project. LGL Rep. FA0144. Rep. by LGL Limited, St. John's, NL for Grieg NL, Marystown, NL. 528 p. + appendices.

Appendix A

Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters

**Pages 3595 to / à 3633
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pages 3096 to / à 3134**

2018

**PLACENTIA BAY ATLANTIC SALMON AQUACULTURE PROJECT
ENVIRONMENTAL PROTECTION PLAN (EPP):
RAS HATCHERY OPERATIONS**



GRIEG NL

9/26/2018

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Preface

Grieg NL's Environmental Protection Plan (EPP) for the Placentia Bay Atlantic Salmon Aquaculture Project is a directive document that provides detailed steps to avoid or minimize negative effects on the environment. The EPP covers operation of the Recirculating Aquaculture System (RAS) Hatchery located in Marystown, Newfoundland and Labrador (NL). The responsibilities and procedures presented in this document are designed to ensure the efficacy of the plan and to allow for ongoing updates to the plan to accommodate improvements. This Preface includes overviews of the following:

- Distribution List
- EPP Responsibilities
- EPP Revision Procedures

Distribution List

The EPP will be provided to relevant Grieg NL personnel, contractors, subcontractors, and government agencies designated as having a surveillance responsibility.

Grieg NL Personnel

- General Manager
- Production Manager
- Environment, Health and Safety Advisor
- Owner Representative
- Grieg NL Site Manager(s) (Land and Sea) where appropriate

Contractors

- General Manager
- Environment, Health and Safety Manager

Subcontractors

- General Manager
- Environment, Health and Safety Manager

Government Agencies

- Department of Municipal Affairs and Environment (DMAE)
- Department of Fisheries and Land Resources (DFLR)
- Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada (ECCC)
- Transport Canada

EPP Responsibilities

The responsibilities of Grieg NL and its employees as well as those of contractors and subcontractors are summarized below.

As the proponent, Grieg NL shall:

- Provide approval for the final issued version of the EPP and subsequent revisions.
- Inspect and monitor project activities during operation of the RAS Hatchery.
- Conduct EPP reviews on a regular and as-needed basis.
- Communicate with relevant government agencies and local stakeholders as required.

The Grieg NL Environment, Health and Safety (EHS) Advisor or their designated representative(s) shall:

- Be responsible for implementation of the EPP.
- Review and approve revision requests.
- Conduct EPP reviews on a regular and as-needed basis.
- Maintain document control.
- Ensure the EPP holders and their personnel are familiar with the EPP and its procedures.
- Strive for compliance with all permits, authorizations, and approval conditions; and ensure that appropriate supervisory personnel are on site during project activities as appropriate.

The Grieg NL Site Managers or their designated representative(s) shall:

- Distribute revisions to EPP holders.
- Be familiar with all aspects of the EPP.
- Confirm that all activities are conducted in accordance with the EPP.
- Hold an environmental awareness session for each Contractor and its personnel, and other personnel to be involved in the Project.
- Report on the efficacy of the EPP.
- Attend weekly contractor meetings.
- Identify any deficiencies in the plan and propose appropriate changes.
- Direct appropriate contingency actions and enact external notifications procedures in the event of an incident.
- In his or her absence, designate a qualified replacement.
- Manage the environmental inspection and monitoring needed to meet EPP requirements and reporting requirements of Grieg NL.

EPP holders shall:

- Keep EPP copy current and enter all revisions on the revision control record.
- Familiarize themselves and their personnel with the EPP and any revisions.
- Initiate changes to improve the EPP.

Contractors, Subcontractors and Site Personnel shall:

- Become familiar with the EPP.
- Become knowledgeable of reporting procedures.
- Comply with the EPP, contract requirements, and applicable laws/regulations.
- Obtain applicable permits, approvals and authorizations in coordination with Grieg NL personnel.
- Attend all required EHS training and orientation programs.
- Report all incidents of non-compliance with the EPP.

EPP Revision Procedures

The EPP is a controlled document and revisions may only be made with the approval of Grieg NL. EPP users are encouraged to submit suggestions for changes and improvements to the EPP, using the *EPP Revision Request Initiation Form* (see below). Upon receipt of suggestions, and where appropriate, designated Grieg NL personnel will prepare a proposed revision to be submitted for approval by Grieg NL's EHS Advisor or another designated representative. Approved revisions will be issued to all members of the EPP Distribution List (see above), accompanied by a Revision Control Record (see below), which will provide the EPP section(s) being superseded and revision instructions. Each revision will also be accompanied by an updated EPP Table of Contents.

Within two working days of receiving an approved EPP revision, EPP users are to:

- Confirm all listed pages have been received in accordance with the Revision Control Record;
- Read the revised text;
- Insert the revised pages into the appropriate position within the EPP, and remove and destroy the superseded pages;
- Confirm the EPP document is in accordance with the updated Table of Contents;
- Enter the revision number and date on the Revision Control Record, and sign; and
- Incorporate the revision into Project activities, and ensure all personnel are familiar with the revision.

Grieg NL Placentia Bay Atlantic Salmon Aquaculture Project Environmental Protection Plan (EPP)

Revision Request Initiation Form

Name:

Affiliation (Position and Company / Government Department):

Date (D-M-Y):

EPP Section to be Revised:

Nature of Revision (e.g., sewage disposal, noise control, etc.):

Rationale for Revision (e.g., environmental or worker safety, etc.):

Suggested Revision:

Please submit to TBD, EHS Advisor, Grieg NL at the following address:
205 McGettigan Blvd., Marystown, NL A0E 2M0

Revision Control Record for the EPP

Revision Number	Date (D-M-Y)	Revised EPP Section(s)	Revision Instructions and Source	EPP Holder's Signature

List of Acronyms

AAR	Aquaculture Activities Regulations
BMA	Bay Management Area
BPWMC	Burin Peninsula Waste Management Corporation
CEPA	<i>Canadian Environmental Protection Act</i>
CFIA	Canadian Food Inspection Agency
CWS	Canadian Wildlife Service
DFLR	Department of Fisheries and Land Resources
DFO	Fisheries and Oceans Canada
DMAE	Department of Municipal Affairs and Environment
DNS	Denitrification System
DSTI	Daily Safe Task Instruction
ECCC	Environment and Climate Change Canada
EHS	Environment, Health and Safety
EIS	Environmental Impact Statement
EPP	Environmental Protection Plan
FCR	Feed Conversion Ratio
GAP	Gasoline and Associated Products
ID	Identification
MARPOL	Marine Pollution (International Convention for the Prevention of Pollution from Ships)
MSDS	Material Safety Data Sheets
NL	Newfoundland and Labrador
OCI	Ocean Choice International
PPE	Personal Protection Equipment
RAS	Recirculating Aquaculture System
RO	Response Organization
SARA	<i>Species at Risk Act</i>
SOP	Standard Operating Procedures
WHMIS	Workplace Hazardous Materials Information System

1.0 Introduction

This Environmental Protection Plan (EPP) has been developed by Grieg NL to describe environmental protection procedures for activities associated with the operation of the land-based hatchery, which is a key component of the Placentia Bay Atlantic Salmon Aquaculture Project. The hatchery facility, referred to as the Recirculating Aquaculture System (RAS) Hatchery, is located in the Marystown Marine Industrial Park adjacent to Mortier Bay. The EPP has been developed in compliance with a condition of the Project release issued by the provincial Department of Municipal Affairs and Environment (DMAE) at the conclusion of an environmental assessment process. The EPP will serve as a set of instructions for Project-related activities and will detail the various environmental permits and authorizations to be issued by different agencies. Separate EPP documents will be prepared for the construction and operation of the sea cage sites in Placentia Bay.

This Grieg NL EPP is considered a living document and will be reviewed and updated on a regular and as-needed basis throughout the various stages of the Project life. Consequently, this is a controlled-distribution document, intended to be maintained in an updated condition by each listed/approved recipient (see Preface for details).

1.1 Purpose of the EPP

The EPP is an important component of overall Project planning and implementation of Project activities. It is considered part of Grieg NL's overall Environment, Health and Safety management system (see Section 3).

The EPP is a stand-alone document describing the responsible Project staff and environmental protection procedures for activities associated with the operation of the RAS Hatchery. Environmental protection procedures for the decommissioning and rehabilitation phase of the Project will be developed at a later date. A construction EPP for the RAS Hatchery has been prepared. In addition, the EPP clearly outlines responsible company personnel include front-line workers, occupational health and safety and environmental staff.

This EPP will be used to ascertain that Grieg NL's environmental-related commitments are implemented, adhered to, and monitored. The EPP will serve to:

- Provide a record of mitigation measure implementation.
- Provide a functional management framework to ensure regulatory compliance and to identify opportunities for continuous improvement in environmental performance.
- Identify and document compliance with applicable legislation, permits and authorizations associated with each Project phase and ensure adequate communication with government environmental surveillance staff.

1.2 Organization of the EPP

The EPP is organized as outlined below and is designed to address DMAE requirements and to facilitate ease of use. The organization of the EPP follows the outline provided in the Grieg NL Environmental Impact Statement (see Section 8.2 of the EIS; LGL Limited 2018) to the extent possible.

Preface – Identifies the distribution list for the EPP and provides document revision and control procedures.

Section 1: Introduction – Lays out the organization of the EPP and overviews the purpose of the document.

Section 2: Overview of the Project – Highlights the key components, location, activities, and timeline for the Project to provide context for the EPP user.

Section 3: Environment, Health and Safety System – Overviews Grieg NL's Environment, Health and Safety (EHS) system, the relationship of the EPP to the Grieg NL Policy on sustainability; the organization, development and implementation of the EPP; and employee environmental orientation.

Section 4: Environmental Protection Procedures – Details environmental protection procedures to be employed during routine operation activities. This section also includes a summary of key environmental concerns associated with Project activities.

Section 5: Contingency Plans – Provides contingency plans for potential unplanned and accidental events such as spills of fuel or other hazardous material and wildlife encounters.

Section 6: Legislation, Permits and Authorizations – Outlines the legislation, required permits, approvals and authorizations for the operation of the RAS Hatchery.

Section 7: Contact List – Provides emergency, advisory and other contact numbers for corporate personnel, contractors, external resources and regulators.

Section 8: Resource Material – Identifies guidelines and resource material relevant to environmental protection measures, mitigation and monitoring.

2.0 Project Description

The Placentia Bay Atlantic Salmon Aquaculture Project has two primary components: (1) a land-based Recirculating Aquaculture System (RAS) Hatchery located in the Marystown Marine Industrial Park and (2) sea cage sites located in the northern portion of Placentia Bay that will be used to grow the salmon to market size (Figure 2.1). The development of the Project, including construction and operation of the RAS Hatchery and sea farms, will undergo a phased approach before reaching peak production of seven million salmon per year. It is anticipated that the RAS Hatchery will be operational in Year 2 and reach full production capacity in Year 6. The first harvest at peak production at the sea farms is anticipated to occur in Year 8.

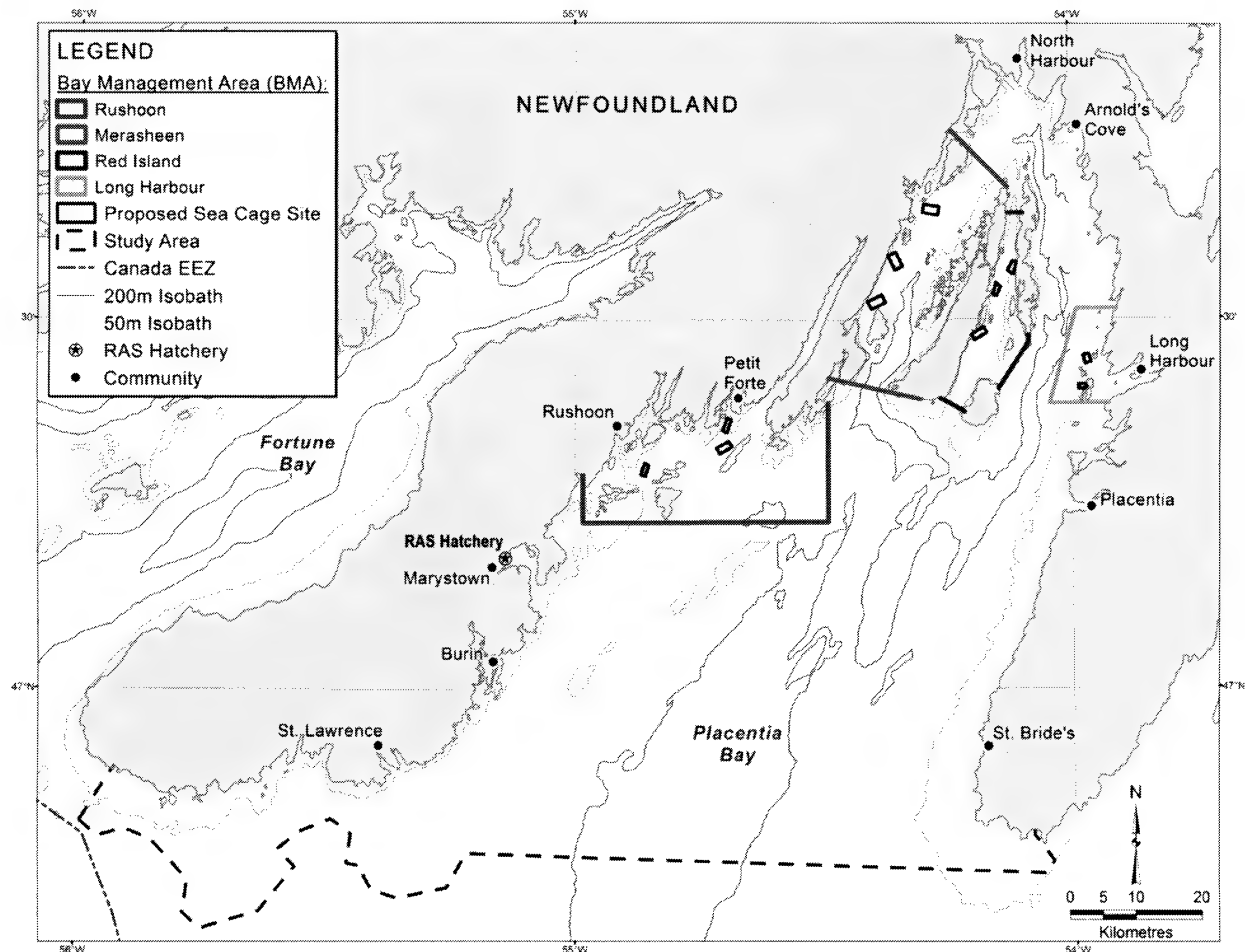


Figure 2.1. The locations of the RAS Hatchery, sea cage sites, and Bay Management Areas for Grieg NL's Placentia Bay Atlantic Salmon Aquaculture Project. [Also shown is the Study Area used in the Environmental Impact Statement].

At the RAS Hatchery, smolt will be grown to sizes ranging from 350–1,400 g and then will be transferred to a well boat and delivered directly to sea cage sites. Eleven sea cage sites will be located within four Bay Management Areas (BMAs), which have been established for biosecurity purposes. Three of the

BMAs are planned for semi-annual production and one BMA is planned for seasonal production. The semi-annual and seasonal sea cage sites will each have a maximum of 12 and 6 sea cages, respectively. Each of these sea cages can hold 160,000 salmon. At peak production, there will be seven active sea cage sites with 78 sea cages in operation per year. Each year, the sea cage sites in one BMA will be fallowed before the sea cages will be restocked with salmon.

Each sea cage site will be attended by several vessels including a feed/accommodation barge, satellite feed barge, service vessel, crew vessel, and a work boat. Once salmon have reached market size (~5 kg) they will be transferred to a dead hold vessel and then onto a third-party for processing.

Personnel working at the sea cage sites will be transported via dedicated crew vessels. Grieg NL anticipates one-week shifts at sea where personnel will live aboard the feed/accommodation barge. The crew change sites will have specific areas for embarkation to and disembarkation from the proposed sea cage sites, which is designed to avoid cross-contamination. Crew changes for the proposed sea cage sites in the Rushoon, Merasheen and Red Island BMAs will be conducted in Petit Forte and in Long Harbour for the Long Harbour BMA.

Services and supplies for all BMAs will be provided using wharf facilities at two former Ocean Choice International (OCI) premises, one each in Marystown and Burin. One of the resupply sites will be designated “inflow” and the other “outflow” to prevent cross-contamination of clean/new equipment going to the sea cage sites and used equipment returning for cleaning and servicing. Additionally, the resupply site designated as outflow will receive waste from the sea cage sites.

2.1 RAS Hatchery

The RAS Hatchery consists of three primary biosecure facilities (i.e., First-Feeding, Smoltification, and Post-Smolt) that have a total area of 30,000 m² (Figure 2.2). The site for the RAS Hatchery in the Marystown Marine Industrial Park was cleared in 2016 and 2017. However, blasting and some grubbing remains to be done before construction on the buildings can commence. The lots in the Marystown Marine Industrial Park are already serviced with three-phase power, municipal water and sewer, and a paved access road. The RAS that will be used at the hatchery is considered state-of-the-art and operates by filtering water from the fish tanks, so it can be reused. The system uses 300 L of water per minute versus the 500,000 L of water per minute, which is typical in a flow-through system that is not reusing any water to accomplish an equivalent production of smolt.

2.2 Sea Cage Sites

The proposed sea cage sites (see Figure 2.1) have areas ranging from 0.8 km² to 3.2 km² and occur in water depths ranging from ~10 m to 308 m. Sites have been selected based on suitable water currents and depths, bottom type, shelter from wind and waves, and input from local users and regulatory agencies. Semi-annual and seasonal sea cage sites will have 12 or 6 sea cages, respectively; sea cages will be arranged in a line with a feed barge located between the cages. The sea cages and associated mooring system used to house fish will be state-of-the-art, heavy duty Aqualine Midgard Systems. Each sea cage is 50 m in diameter, extends 45 m below the surface, and will consist of a cage net, floating collar, gangway, sinker ring (tube), winches, and fish mortality removal system.

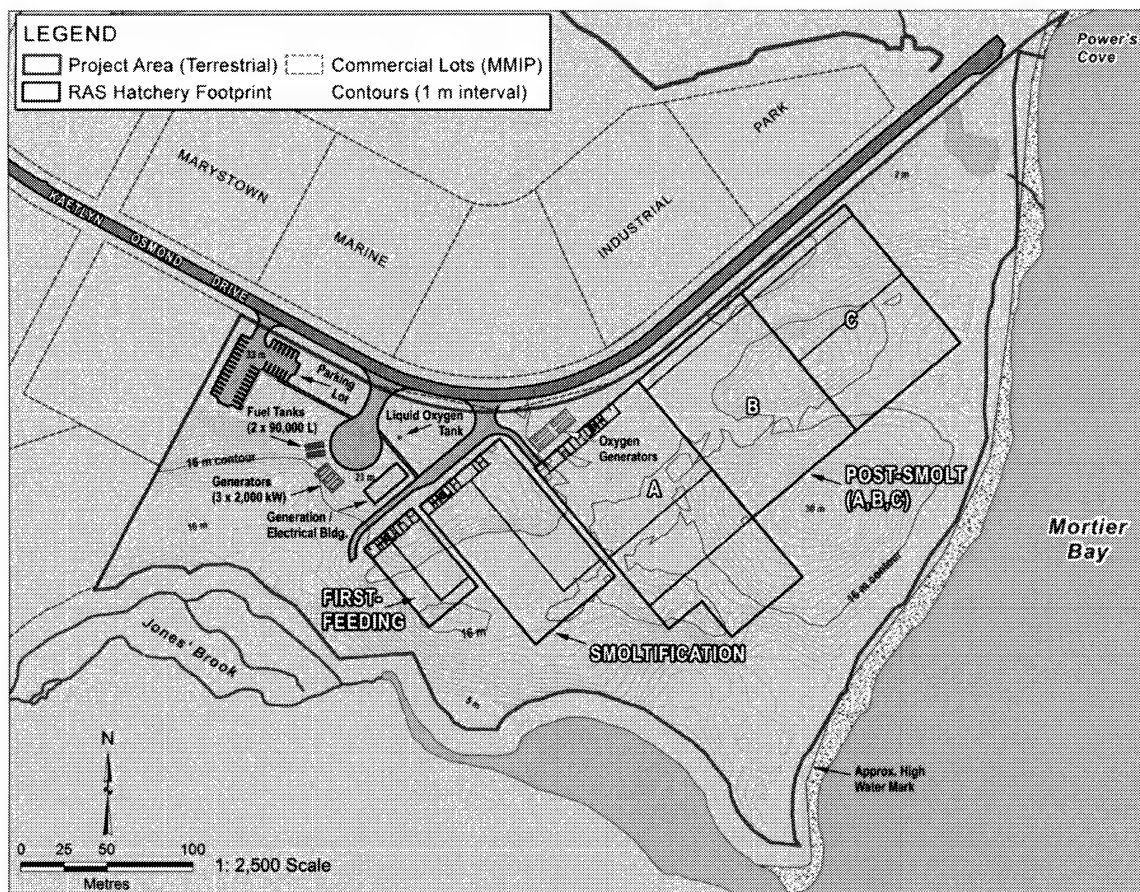


Figure 2.2. Schematic of RAS Hatchery in the Marystown Marine Industrial Park.

2.3 Best Available Technology

Grieg NL will use the best available technology at the RAS Hatchery and sea cage sites, along with a number of mitigation measures that go beyond the common aquaculture industry standard. These measures include such approaches as the utilization of sterile triploid all-female Atlantic salmon to minimize potential effects on wild salmon, the use of lumpfish (*Cyclopterus lumpus*) to control sea lice, and following protocols that exceed government requirements.

3.0 Environment, Health and Safety Management System

Grieg NL recognizes environmental protection as one of their guiding principles and a key component of sound business performance. Grieg NL is committed to providing a quality service in a manner that ensures a safe and healthy workplace for its employees and minimizes potential negative effects on the surrounding environment. Grieg NL will operate in compliance with all federal, provincial and municipal environmental legislation, and strive to use pollution prevention and environmental best practices whenever possible.

Grieg NL's EHS system will:

- Integrate the consideration of environmental concerns and interactions into all decision making and activities.
- Promote environmental awareness among its employees and require them to work in an environmentally responsible manner.
- Train, educate and inform its employees about environmental issues that may affect their work.
- Promote sustainability through the practice of reuse, recycle, refurbish and reduce waste.
- Avoid or reduce use of hazardous materials and products, seek substitutions when feasible, and take all reasonable steps to protect human health and the environment when such materials must be used, stored and disposed of.
- Operate by the highest standards possible to ensure protection of the environment while avoiding unplanned events (spills).
- Develop and maintain appropriate emergency and spill response capabilities.
- Train all employees in best practices for health and safety.
- Provide necessary Personal Protective Equipment (PPE) and instruction for its use and care.
- Develop and enforce safety and health rules, requiring that employees comply with these rules as a condition of employment.
- Investigate every accident, promptly and thoroughly, to determine its cause, and whenever possible, put measures in place to ensure against recurrence.
- Strive to continually improve environmental performance by periodically reviewing and updating EHS policy.

3.1 Roles and Responsibilities

The following section outlines the management structure, roles and responsibilities of personnel, for the implementation of Grieg NL's EHS policy for the operation phase of the RAS Hatchery.

Grieg NL General Manager: Primary person responsible for overall development of the RAS Hatchery, including environmental issues. Specific environmental responsibilities include:

- Ensuring environmental considerations are a part of the Project decision making process.
- Ensuring adequate plans and resources are in place to achieve environmental commitments to minimize environmental effects.
- Reviewing incident reports as they are submitted and ensuring the proper course of action is taken to manage unexpected environmental conditions or events.

Grieg NL Production Manager: Primary person responsible for day-to-day operation of the RAS Hatchery. Reports to the Grieg NL General Manager. Specific environmental responsibilities include:

- Ensuring adequate plans and resources are in place to achieve EPP commitments.
- Approve incident reports as they are submitted and ensuring the proper course of action is taken to manage unexpected environmental conditions or events.

Grieg NL Land-based Site Manager(s): Report to the Grieg NL Production Manager. Specific environmental responsibilities include:

- Ensuring personnel properly implement EPP procedures and reporting requirements.
- Completing and submitting incident reports to the Grieg NL Production Manager.

Grieg NL EHS Advisor: Primary Grieg NL employee responsible for overall environment, health and safety. Reports to the Grieg NL Production Manager and is responsible for:

- Providing environmental orientation to new employees.
- Providing awareness training on an as-needed basis.
- Ensuring that equipment is installed correctly/safely.
- Identifying potential environmental hazards.
- Determining ways of reducing EHS risks.
- Liaising with relevant authorities and contractors.
- Keeping up to date and ensuring compliance with current EHS legislation.

Grieg NL Water Quality Specialist: Responsible for routine monitoring of water quality and water level in the well. Reports to the Grieg NL Production Manager. Specific environmental responsibilities include:

- Routine monitoring of water quality of incoming water and water within all land-based production facilities.
- Routine monitoring of water levels in well supplying water to all land-based facilities.
- Maintaining and submitting records of all monitoring to the Grieg NL Production Manager.

Grieg NL EHS Representatives: Land-based personnel designated as employee representatives for EHS. Report to their appropriate Site Manager and are responsible for:

- Ensuring provision of orientation of new employees or awareness training is conducted as required.
- Coordinating routine EHS meetings.
- Maintaining EHS documentation of routine meetings.

3.2 Sustainability Policy

A key component of the Grieg NL EHS system is its sustainability policy, which is overviewed here and promoted throughout the EPP. Ultimately, Grieg NL's vision is to provide Placentia Bay Atlantic salmon for the world. Achieving this vision in a sustainable manner will be met through the company's commitment to the following principles: leadership, transparency, integrity, continuous improvement, inclusivity, and stewardship.

3.2.1 Priorities

Grieg NL's goal is the sustainable production of Atlantic salmon in the waters of Placentia Bay. Based on the expectations of Grieg NL and its stakeholders, the following priorities have been identified as key elements that are important for Grieg NL's achievements, profitability and survival with a focus on local and global sustainability:

- Fish health and welfare;
- Sea lice control;
- Fish escape control;
- Minimal emissions;
- Minimal interactions with wildlife; and
- Climate change.

3.2.2 Commitment and Scope

The sustainability policy will apply to all operations under Grieg NL. Grieg NL will utilize third-party service companies for many aspects of its operations and acknowledge that although Grieg NL cannot control the decisions of these parties, it commits to educate them of its policy. These third-party service providers will be encouraged to align their operating procedures with Grieg NL policy objectives. Grieg NL's priorities and any relevant decisions will be compliant with local, provincial and federal laws and regulations. Grieg NL will strive to exceed legal requirements with regard to sustainability, in order to be innovative and to demonstrate sustainability leadership.

3.2.3 Objectives

Grieg NL commits to:

- Focus on a safe and environmentally friendly food chain that produces quality products for consumers.
 - Strive to improve the feed conversion ratio (FCR) to a 1:1 ratio combined with optimization of fish products using the processing discards for human and other pharmaceutical or nutraceutical products.
- Balance profitable growth and innovation with environmental sustainability by using innovative technology and enhanced data collection to improve ecosystem understanding and sustainability decision-making.
 - Utilizing a RAS that requires minimal water consumption during smolt production.

- Target to utilize fish feed that is produced using protein not designated for human consumption.
- Balance sustainable aquaculture and productive seas to maintain fish health and welfare, while also protecting the shared natural resources of the sea.
 - Utilizing sterile triploid all-female Atlantic salmon for all production in Placentia Bay.
- Providing a work environment that will attract and retain employees with a focus on health and safety, diversity, equity and integrity in the workplace.
 - Direct employment approaching 150 people in the Province upon reaching steady-state production.
- Local value creation, not only by hiring local residents, supporting local industries and utilizing third-party service contractors, but also contributing to the local communities by volunteering and donating resources.
- Publishing an annual Sustainability Report reviewing progress on achieving its goals that will be available to stakeholders and the public.

3.3 Development and Implementation of the EPP

The EPP is an essential component of Grieg NL's EHS system and is intended to ensure that all Project personnel abide by appropriate environmental protection actions, encompassing all Project phases for the RAS Hatchery. As noted earlier, this is a living document that will be revised as necessary based on review and approval of received suggestions, and to meet the requirements of reviewers and environmental approvals. EPP documents are typically revised as needed to reflect site- and/or task-specific activities as they relate to environmental protection measures and are structured to allow for revisions as Project activities progress. A separate EPP was prepared for construction of the RAS Hatchery and in future, an EPP will be prepared for decommissioning activities.

3.3.1 General Practices and Training

Grieg NL recognizes that communication and training are key to ensuring that Project activities with the potential to create a negative environmental effect are identified, and that preventative and/or mitigation measures are implemented. All Grieg NL employees, contractors, and subcontractors will undergo employee orientation, which includes a review of environmental concerns and procedures. Additionally, multiple mechanisms are in place to ensure that the EPP contents are communicated to employees throughout the Project. A summary of these general practices is provided below.

3.3.1.1 Employee Orientation

Grieg NL recognizes the importance of EHS and is committed to ensuring a safe work environment for its employees, contractors and subcontractors, while also recognizing the importance of procedures and practices that will protect the environment. Grieg NL considers good husbandry and a strong focus on environmental protection essential during all Project phases and will emphasize this message to all new employees as part of their training and environmental orientation, and within Grieg NL's ongoing EHS management system. Grieg NL will ensure that all Project personnel, including contractors and subcontractors, are prepared and capable of completing their jobs competently and responsibly.

Grieg NL will maintain records of all environmental training and orientation sessions, including a description of the presented material, session dates and attendance. All Grieg NL personnel will receive orientation by a supervisor with awareness training. As well, on-going training will be provided on an as-needed basis. A dedicated software program (i.e., *Intelix*, business intelligence software) will be utilized to maintain these records and certifications.

All Project personnel working on site are required to participate in a site-specific Project and environmental orientation upon commencement of their employment and periodically thereafter as needed. This orientation will increase awareness of the Grieg NL EPP, including environmental protections relative to site-specific work activities, regulatory requirements, emergency preparedness and spill response capabilities, as well as client/contractor expectations for individual personnel roles and responsibilities.

Environmental orientation will include the following:

- Details on Grieg NL's EHS management system, EHS policy and obligations under the EPP.
- A presentation on environmental protection procedures to be applied to all work activities.
- Procedures for spill response and environmental emergencies.
- Personnel roles and responsibilities, including emergency preparedness.
- Description of tasks and activities, including any relevant activities that could involve environmental concerns.
- Instruction on specific procedures for environmental protection, including prevention, mitigation measures and documentation.
- The importance of enforcement and compliance with the EPP.

3.3.1.2 Operation Phase

During operation of the RAS Hatchery, Grieg NL has identified the following general mechanisms for dissemination of and conformance to the EPP:

- *Employee Orientation*: Grieg NL is committed to ensuring that its personnel are knowledgeable, trained and prepared for any tasks they may be required to perform. Employee Orientation will be mandatory for new employees. Supplemental orientation sessions will also occur on an as-needed basis, such as when revised procedures have been developed or new equipment introduced.
- *Daily Safe Task Instruction (DSTI)*: Supervisors will meet daily with their staff to discuss tasks to be performed each day. Risks and hazards will be identified as well as any measures to minimize or mitigate these. For tasks that involve high environmental or safety risks, such as fish transfers, the use of DSTI Forms may be implemented in order to identify the risks involved with these tasks, and to ensure that these risks have been clearly communicated to staff, with documentation to be provided of this communication.

- *Weekly Toolbox Meetings:* Personnel will be required to participate in a Weekly Toolbox Meeting. These meetings will provide an opportunity for staff to relay any safety or environmental concerns to their supervisors. Although informal, attendance will be recorded, topics discussed (and action commitments) will be documented. All meeting records will be maintained on file.
- *Environmental Action Meetings:* Should an environmental issue arise that requires action, and is deemed manageable within Grieg NL's responsibility, a site manager and/or the Production Manager can request an Environmental Action Meeting to discuss the issue. Upon request, staff will participate in efforts to address and resolve the specific environmental issue.

3.3.1.3 Overall Operations

- *Annual Environmental Performance Review:* In order to continually improve on its performance, Grieg NL will hold annual environmental performance review meetings. Site managers, along with the Production Manager and/or General Manager, will review environmental performance and compliance at the RAS Hatchery. These meetings will provide an opportunity to ensure EPP procedures as well as permitting and governmental policies are consistent.
- *Monthly/As-needed Toolbox Meetings:* The Production Manager will meet monthly or as required with site managers from the RAS Hatchery. These informal meetings will address, among other topics, Health, Safety, Environment and Security issues. These monthly meetings will provide an avenue to discuss any concerns or recent incidents.

4.0 Environmental Protection Procedures

Environmental protection procedures are provided here for each of the primary operation activities associated with the RAS Hatchery. As the work proceeds, these procedures may be modified or new procedures implemented, to account for new Project activities, site conditions, changes in engineering design or operational methods, and as a result of lessons learned during activities.

For Project activities at the RAS Hatchery, Grieg NL will have Standard Operating Procedures (SOPs) in place, which provide step-by-step instructions for conducting various operation activities. These SOPs will also contain steps to protect the environment and which are in line with the procedures provided below. Employees, contractors and suppliers are required to follow and adhere to all environmental protection procedures. Also, as per the terms and conditions of the EIS release issued by the DMAE, Grieg NL shall adhere to all mitigation, monitoring, and commitments stated in the EIS.

4.1 Storage, Transportation, Transfer, Handling and Disposal of Fuel and Other Hazardous Substances

Environmental Concern

During the operation phase, some substances will be used which are or may be classified as hazardous including petroleum, oil and lubricants; chlorinated and non-chlorinated solvents (e.g., cleaner-degreasers); waste petroleum products (e.g., used engine/motor oil); glycol (e.g., antifreeze), paints, and epoxies. The primary concern regarding the use and storage of fuel or other hazardous materials is an uncontrolled or accidental release into the environment and subsequent negative effects on terrestrial and aquatic habitat and species, soil, surface and groundwater quality and human health and safety.

Environmental Protection Procedures

The following procedures will be implemented to reduce the likelihood of accidental release of hazardous substances that may result in negative environmental effects:

1. Procedures for the handling of fuels and other hazardous materials as well as contingency plans for spills will be present in hard copy at receiving, storage, transfer and disposal areas.
2. Any soil contaminated by small leaks of fuel, oil or grease from equipment shall be cleaned up and disposed of in accordance with the applicable regulations, under the provincial *Environmental Protection Act* (2006) and Used Oil Control Regulation (82/02). The Used Oil Control Regulation (82/02) will be used as a guideline to the DMAE requirements for such disposal.
3. Smoking will not be permitted on the Grieg NL facility property.
4. A complete inventory of the hazardous materials on the job site shall be maintained according to the Workplace Hazardous Materials Information System (WHMIS) Regulations and will be made available to regulatory agencies upon request or in case of any emergency.
5. All sub-contractors and Grieg NL employees shall be required to observe strict compliance with the requirements of WHMIS regarding employee training, use, handling, storage, and

- disposal of hazardous materials and regarding labeling and provision of Material Safety Data Sheets (MSDS), as required by WHMIS legislation.
6. Tanks shall be located in areas where spills, should they occur, shall not flow to watercourses, water bodies, ditches or the marine environment.
 7. Fuel tanks shall be located on concrete pads surrounded by a containment barrier to prevent spills to the environment as described in section 27 – Construction and Installation Standards of *Storage and Handling of Gasoline and Associated Products Regulations, 2003*. Tanks for fuels and other hazardous materials shall be self-dyked or be positioned over an impervious mat, surrounded by an impervious dyke of sufficient height, more specifically:
 - a. Where a dyked area contains only one storage tank, the dyked area will retain not less than 110% of the capacity of the tank; and
 - b. Where a dyked area contains more than one storage tank, the dyked area will retain not less than 110% of the capacity of the largest tank or 100% of the capacity of the largest tank plus 10% of the aggregate capacity of all the other tanks, whichever is greater.
 8. All storage facilities shall be located away from operation activities, provided with secondary containment, and inspected on a regular basis in compliance with all government laws and regulations.
 9. Oils, grease, gasoline, diesel or other fuels or any material deemed to be hazardous shall be stored at least 100 m from any watercourse or the ocean.
 10. Fuel and other hazardous materials storage areas and non-portable transfer lines shall be clearly marked or barricaded to protect against damage by moving vehicles. The markers will be visible under all weather conditions. Barriers shall be constructed in compliance with the provincial Storage and Handling of Gasoline and Associated Products (GAP) Regulations (58/03).
 11. Hazardous materials shall be properly labelled and stored in an appropriate storage cabinet, cupboard or designated area.
 12. Containers containing hazardous materials shall be appropriate for the material being stored and shall always be kept sealed when not in use.
 13. The transportation, use and storage of fuel and other hazardous materials is regulated by The Storage and Handling of GAP Regulations and Amendments, *Transportation of Dangerous Goods Act* (1992) and *Dangerous Goods Transportation Act* (2006). Employees and contractors shall follow all required regulatory policies and procedures.
 14. Hazardous Storage Areas shall be equipped with appropriate firefighting equipment.
 15. All Occupation Health and Safety regulations regarding the use, storage and training on all classes of fire extinguishers that may be required shall be followed.
 16. Waste oils, lubricants and other used oil shall be retained in a tank or closed container and shall be disposed of regularly under contract with a licensed used oil collector in accordance with the Used Oil Control Regulations (82/02).
 17. Greasy or oily rags or other materials at risk of spontaneous combustion shall be deposited and stored in appropriate receptacles. This material shall be removed from the work site on a regular basis and shall be disposed of in an approved existing waste disposal facility. Removal of these materials from the job site is regulated under the *Transportation of Dangerous Goods Act*.

18. All hazardous materials shall be handled according to the provincial *Environmental Protection Act* (2006) and disposed of in accordance with government laws and regulations at an approved off-site hazardous waste disposal facility.
19. Regular inspections of hydraulic and fuel systems on machinery shall be performed, and all leaks shall be repaired immediately upon detection. Worn or damaged hoses, seals and fittings shall be promptly repaired or replaced.
20. All deliveries of fuel shall be in conventional fuel delivery trucks that are operated by licensed distributors.
21. When fuelling equipment, operators shall:
 - a. Be in attendance for the duration of the operation;
 - b. Use leak-free containers and reinforced rip and puncture-proof hoses and nozzles;
 - c. Use hoses that have a design pressure rating of at least 150% of the maximum head of the system;
 - d. Lock out all tank nozzle valves except the valve currently in use;
 - e. Seal all storage container outlets except the outlet currently in use; and
 - f. Ensure drip pans, and other precautionary measures as required, are in place prior to the start of refueling activities.
22. Fuel unloading facilities shall be equipped with drip pans to collect hose drainage and drips. Hoses or pipes used for fuel transfer shall be equipped with properly functioning and approved check valves, spaced to prevent backflow of fuel in the case of failures.
23. A fuel and other hazardous materials spill contingency plan, and appropriate emergency spill equipment, shall be in place on site.
24. All spills of fuel and hazardous materials shall be reported immediately to the EHS Advisor. Any spill of any volume to the marine environment or spills of 70 L or more on land shall be reported immediately in accordance with provincial regulation.
25. Any spill on land regardless of size that may enter a waterbody frequented by fish shall be reported immediately to Canadian Coast Guard Environmental Emergencies: (709) 772-2083 or 1-800-563-9089, as required by the *Fisheries Act* and Section 201 of *Canadian Environmental Protection Act (CEPA)*. All such spills shall also be reported immediately to the EHS Advisor and Production Manager.
26. During the operations phase, Grieg NL shall register and become a member of a local Response Organization (RO) to avail of these services should a spill incident exceed the company's ability to respond.
27. Spill kits shall be maintained at the RAS Hatchery for quick response purposes.
28. All selected response equipment shall be selected for its suitability/acceptability for deployment.
29. All employees and contractors shall be made aware of the Spill Management Plan and their role.
30. All petroleum-based products used in the facility during operation including oils, fuels, and greases shall be reused when possible (e.g., waste oil can be collected and burned).
31. When possible, environmentally friendly options shall be used (e.g., food grade grease/oil).
32. Reduce the use of products such as paints and only paint areas as needed. Unused paint shall be recycled when possible or disposed of at an approved waste disposal area.

4.2 Storage, Handling, and Disposal of Solid Waste

Environmental Concern

The release of solid waste is a concern to human health, drinking water quality, aquatic and terrestrial ecosystems.

Solid waste (e.g., domestic waste, paper, cardboard, wood, metals, etc.) will be generated periodically during operation activities. These wastes, if not properly controlled and handled, will be unsightly and may cause human safety and health concerns. Uncontrolled waste may also attract wildlife leading to potential human-wildlife encounters.

Environmental Protection Procedures

1. The amount of waste generated and requiring disposal shall be minimized as much as possible.
2. All wastes shall be handled according to procedures in Grieg NL's Waste Management Plan and in compliance with all relevant regulations.
3. A refuse wood site shall be identified for local use for disposal of wood pallets and other excess wood materials.
4. Wood products shall be chipped for disposal whenever possible.
5. Scrap steel and plastic products such as piping will be retained by Grieg NL for use in facility repairs.
6. Where this is not practical due to materials being damaged or too small, steel products will be recycled through local companies.
7. Plastic products shall be recycled where possible with disposal only when no other option remains.
8. All waste produced by the fish including fish feces and uneaten feed shall be separated out of solution and treated by mechanical and biological treatment.
9. The collected waste from the fish (sludge with ~20% dry solid content) shall be collected by truck by the Burin Peninsula Waste Management Corporation (BPWMC) or another approved purchaser.
10. Prior to operations, Grieg NL shall provide estimates of the quantity and composition of sludge that will be produced to determine if a Certificate of Approval for Composting is required through the DMAE.
11. All operational debris produced at the facility including general waste, electronic waste, feed bags, pallets, and litter will be recycled, reused or reduced if appropriate (e.g., buy feed and products in bulk, buy products with less packaging, pallets can be reused for transportation within the facility or broken down for chipping, recycle cardboard, feed bags, aluminum cans, plastic bottles and electronic waste, etc.).
12. On-site waste shall be disposed in accordance with the BPWMC.

4.3 Sewage Disposal

Environmental Concern

The release of untreated sewage may pose risks and/or concerns to human health, drinking water quality and marine and freshwater ecosystems.

Environmental Protection Procedures

1. During operations, a BMS Blivet waste water treatment system will be utilized. The Blivet system discharges its treated effluent to dedicated exfiltration galleries installed on the shore of the Marystown Marine Industrial Park. The Town of Marystown also has an operational Abydoz engineered wetlands system, which diverts and treats a relatively small portion of its sanitary sewer contents.

4.4 Use, Storage, and Transfer of Eggs

Environmental Concern

There is concern that the imported European strain of Atlantic salmon used in the RAS Hatchery may upon transfer to the sea escape, leading to potential interactions with wild salmon that may affect their biological fitness.

Environmental Protection Procedures

1. Grieg NL shall acquire fertilized all-female sterile triploid Atlantic salmon eggs from Stofnfiskur (based in Iceland), an approved exporter to Canada of Atlantic salmon eggs.
2. Grieg NL shall continue to renew its CFIA egg import permit (Permit No. Q-2016-00213-) every three months as per regulations.
3. Prior to shipment of the eggs from Stofnfiskur, eggs shall be tested and certified as disease free, triploid and all-female.
4. Fertilized all-female triploid eggs shall be shipped via Air Cargo at 350 degree day development in styrofoam containers. Upon arrival, the boxes of eggs shall be transported to the RAS Hatchery in Marystown.
5. Upon arrival, all containers of eggs shall enter a disinfection room where they will be rinsed, disinfected (with an iodine solution) and de-boxed. All equipment encountering the eggs or egg container prior to disinfection shall also be disinfected. Records of time, source, and location of eggs shall be maintained.

4.5 Storage, Transportation, Handling and Dispensing of Fish Feed

Environmental Concern

Fish feed at the RAS Hatchery site may attract pests (e.g., wild animals) and will also generate plastic feed bag waste.

Environmental Protection Procedures

1. Fish feed will be stored indoors to minimize the attraction of wild animals, eliminate the chance of disease transfer from wild animals, and minimize the lethal control of pests/predators.
2. Feed shall be delivered in bulk and stored in silos.
3. An automatic feeding system shall be used where appropriate based on feeding tables/software, cameras and people to ensure no spill or waste of feed.

4.6 Storage, Handling and Dispensing of Chemotherapeutants

Environmental Concern

Grieg NL may be required to periodically use antibiotics and anesthetics. All smolt will require vaccinations prior to leaving the RAS Hatchery for transfer to the well boat. Antibiotics and vaccines will not be stored in the RAS Hatchery but will only be on site as required. Anesthetics will be stored in the RAS Hatchery.

It is important that fish health is maintained but with the judicious use of chemotherapeutants. Additionally, it is important that unused or spilled chemotherapeutants are handled properly.

Environmental Protection Procedures

1. Grieg NL shall closely follow its Fish Health Management Plan and SOPs for the proper storage, handling, and dispensing of chemotherapeutants. The Fish Health Management Plan and SOPs shall be reviewed and approved by Grieg NL's private veterinarian and the provincial veterinarian prior to commencement of hatchery operations.
2. All chemotherapeutants shall be approved for use in Canada and administered by trained/licensed professionals.
3. Antibiotics shall be administered with approval of the provincial veterinarian. Antibiotics shall be administered in fish feed and will not be stored in the RAS Hatchery but in secure feed silos.
4. Vaccinations (type, amount) shall only be administered with the approval of the provincial veterinarian and by trained/licenced Grieg NL personnel. Vaccines shall only be present in the RAS Hatchery during periods when vaccination is ongoing.
5. There shall be judicious use of anesthetics as determined in consultation with Grieg NL's private veterinarian.
6. If euthanasia of fish is required it shall be accomplished via an overdose of anesthetic, complete spinal severance, or a sharp blow on the top of the head ensuring a result of fish that are permanently unresponsive to stimuli. Records of all fish either culled or sampled shall be maintained.
7. Any antibiotics, anesthetics, or vaccines (or diluent) requiring disposal, as well as biomedical waste such as needles shall be handled according to biomedical waste disposal guidelines and municipal regulations.

8. Grieg NL shall publically release all confirmed reports of disease in hatchery fish within 24 hours as per DMAE conditions of EIS release.
9. Grieg NL shall publicly release all use of chemotherapeutants (antibiotics, vaccinations, and anesthetics) annually as per DMAE conditions of EIS release.

4.7 Storage, Handling and Disposal of Fish Mortalities and Ensilage

Environmental Concern

There is concern that the volume of fish mortalities and ensilage generated at the RAS Hatchery may not be properly handled and will overwhelm local disposal facilities. Also, there is concern about the potential transfer of disease from fish to wild animals.

Environmental Protection Procedures

1. A mortality vacuum and ensilage system will be used to transfer dead fish from each facility to a centralized ensilage tank approved for this material.
2. A mortality vacuum system shall be utilized within each facility in the RAS Hatchery.
3. This vacuum system is equipped with a funnel receptacle to transport the fish in a biosecure manner into a grinder that chops the mortalities into small pieces, while a doser adds acid to produce ensilage with a pH of 4.5 or lower.
4. Access to the ensilage storage tank shall be limited to authorized personnel only.
5. Ensilage shall be stored until sufficient quantities are acquired to justify transport to either a local company in Newfoundland that will use the product as a commercial fertilizer and/or animal feed additive or a feed supply company located in Denmark.
6. Ensilage shall be collected by an approved third party using approved transport containers and disposed in the most economical manner (fertilizer, composting or other viable options).
7. Grieg NL shall demonstrate that waste from the RAS Hatchery can be managed in a manner that meets the approval of DMAE, prior to commencement of hatchery operations as per DMAE conditions of EIS release.

4.8 Biosecurity

Environmental Concern

There is concern about disease transfer amongst fish within the RAS Hatchery. As a component of biosecurity measures at the RAS Hatchery, proper cleaning and disinfection of equipment will be crucial to eliminate potential cross-contamination between tanks and buildings.

Environmental Protection Procedures

A biosecurity plan will be in place prior to operation of the RAS Hatchery and will include the following procedures:

1. The highest standards in biosecurity procedures will be maintained including disinfection of equipment, personnel movements, pest control, maintenance and record keeping procedures for the hatchery. These measures will be clearly outlined in numerous SOPs.
2. Cleaning and disinfection shall occur between events such as grading, between year classes, the transfer of fish from one building to another, and a fish health event.
3. Smaller equipment that is used daily shall be cleaned and disinfected at the end of each shift.
4. Electrical equipment shall be wiped down with disinfectant wipes and heat applied.
5. Tanks shall be cleaned and inspected on a routine schedule.
6. There will be separate, biosecure rooms/buildings for each stage of salmon development.
7. In addition to daily husbandry practices noted above, protocols shall be in place to enhance biosecurity as personnel, equipment, and fish move between rooms and/or buildings.
8. Air movement in and out of the facility as well as pressure is controlled and filtered.
9. Doors are controlled by a central access system where each worker must have the required credentials (embedded into an identification [ID] tag) to enter their work area and may not enter other areas to prevent cross-contamination.
10. Entrance to production halls (i.e., where grow-out tanks are located) require strict biosecurity measures, and are designed accordingly.
11. Personnel shall have separate work clothes for each facility and will be required to change upon entering a new building. Disinfection procedures for personnel and their clothing will also be in place. These and other procedures will be outlined in Grieg NL's Fish Health Management Plan.
12. The day prior to transport of fish from the RAS Hatchery to the sea cages via well boat, all transfer equipment (i.e., pipes, hoses, pumps, counters) shall be checked and prepared, including checking the pipe and hose for breaches.

4.9 Fish Transfers at RAS Hatchery

Environmental Concern

There is concern that smolt from the RAS Hatchery may escape during transfer to the wellboat leading to potential interactions with wild salmon that may affect their biological fitness.

Environmental Protection Procedures

The transfer of smolt shall be in such a way as to minimize the likelihood of escapes through proper equipment use and transfer procedures including:

1. Each RAS Hatchery building shall be equipped with a fish pump and a counting system, which facilitates transfer of fish between tanks and between buildings.
2. Health checks by a veterinarian shall be conducted, including sampling a number of fish from each tank that is being transferred to sea.
3. Smolt shall not be transported if there are any health concerns or until the transfer permit from the DFLR, DFO and Canadian Food Inspection Agency (CFIA) is received.
4. The day prior to transport, all transfer equipment (i.e., pipes, hoses, pumps, counters) shall be checked and prepared, including checking the pipe and hose for breaches.
5. A checklist shall be followed on the day of transfer for personnel at the hatchery.

6. Fish shall only be transferred to the well boat from the facility during calm conditions.
7. Fish are transferred via flexible hose transfer pipes which will only be connected when in use and stored when not in use.
8. Smolt shall be transferred to a well boat via a double pipe (~150 m in length) leading from the Post-Smolt Facility to Mortier Bay. The pipeline shall be constructed such that a protective sacrificial pipe surrounds the transfer pipe, protecting the transfer pipe from wear and abrasions.
9. A reinforced, continuous hose extending ~50 m from the shoreline to the well boat shall be used to transfer the fish. The hose will sit at the water's surface and shall be continuously monitored by personnel.
10. Fish shall be counted via video monitoring and a counter as they exit the hatchery and as they enter the well boat.
11. Drop nets of appropriate mesh size and sufficient size to cover the entire work area shall be placed under the work area and above the sea surface to contain any fish in the event one is "dropped" while being handled.
12. Grieg NL shall publically release all reports of salmon escapes within 24 hours as per DMAE conditions of EIS release.

4.10 Groundwater Use

Environmental Concern

Water that will be used to initially fill the RAS Hatchery tanks, as make-up water to replenish the small amount of water lost due to evaporation, and to supply water to the hatching units (maximum 300 L/min) will be supplied by a nearby well, located in the town of Marystown near the intersection of McGettigan Boulevard and Centennial Road (47.180115°N, 55.142401°W). The well was drilled specifically for the Project, with the intention of reducing the effects on Marystown's municipal water supply.

There is concern that water use by the RAS Hatchery may become contaminated and/or become depleted thereby impacting hatchery operations.

Environmental Protection Procedures

1. A groundwater monitoring system shall be in place prior to operation of the RAS Hatchery.
2. Water levels in the well shall be monitored via the installation of a level monitoring system and routine (i.e., monthly) water samples tested for deviations from samples collected during initial well tests.
3. A back-up water supply shall be identified as part of a contingency plan for the RAS Hatchery including contingency for failure of the pump and/or well. This contingency plan shall be developed for DMAE approval prior to operations.
4. To confirm water use numbers, a well-head protection and water quality monitoring plan (ambient and real-time) shall be developed for DMAE approval prior to operations (as per the conditions of EIS release).

5. The RAS Hatchery facilities requiring the largest volume of water shall be located on the down slope portion of the building site so that water can be gravity fed, thereby reducing the pumping energy requirements.
6. The local water reservoir is a surface water supply source. Grieg NL shall utilize a groundwater source for its operations that will not impact the town water supply.
7. Prior to operations, Grieg NL shall quantify the amount of water required to fill hatchery tanks and to maintain water levels during production.

5.0 Contingency Plans

Contingency plans to address incidents and unplanned situations that may occur during the operation of the RAS Hatchery have been developed and will be modified as required. Grieg NL has developed a separate Emergency Response Plan that details procedures for personnel health and safety and response to accidents, malfunctions, and emergencies. Grieg NL has also developed a Spill Management Plan. These documents are the first point of reference for emergency responders in case of an emergency on site. Information provided in this section is meant to support the Emergency Response and Spill Management Plans and be available as an additional reference.

The following contingency plans have been developed to address accidental and unplanned situations that may occur during the operation phase at the RAS Hatchery:

- Fuel and Hazardous Materials Spills
- Forest Fires
- Wildlife Encounters
- Extreme Weather Events
- Discovery of a Species at Risk
- Mass Mortality Event
- Catastrophic Failure of Water Supply

Notwithstanding these contingency plans, Grieg NL supports preventative measures as the first line of defence against the possibility of incidents.

5.1 Fuel or Hazardous Material Spills

Grieg NL will lead and coordinate any field response to environmental incidents related to their activities. During operation of the RAS Hatchery, it is anticipated that spilled material will be primarily fuel, lube, and hydraulic fluid originating from equipment wear and tear and/or malfunction. Therefore, in the event of a spill, procedures for responding to hydrocarbon spills outlined herein, shall apply:

1. Assess the situation (Safety First). Personnel shall not approach the spill area without appropriate PPE.
2. Identify priorities while considering the threat to people, property, and the environment.
3. Initiate the appropriate response actions:
 - The individual who discovers the leak or spill shall make a reasonable attempt to immediately stop the leakage and contain the flow, where safe to do so.
 - Contact emergency personnel and request additional support if necessary.
 - Reporting: spill location, type of product, estimated volume and terrain condition at the spill site will be determined and reported immediately to Grieg NL's EHS Advisor for further reporting to authorities, as appropriate.
 - Initiate the containment and recovery of any free product and/or contaminated material.

4. Dispose of all waste material in the appropriate manner.
5. Restore the site to the satisfaction of the Project representative or governing regulatory body.
6. Document and investigate as required.

Reportable spills include:

- A spill or leak greater than 70 L on land;
- A spill or leak on land, regardless of quantity, that has the potential to contaminate nearby property or enter a water body or sewer;
- Spills or leaks from storage tanks; or
- A spill or leak in the water, regardless of quantity.

Spills meeting the above criteria shall be reported immediately to regulatory authorities via the **Environmental Emergency Report Line at (709) 772-2083 or 1-800-563-9089**.

In reaching decisions on containment and clean-up procedures, the following criteria will be applied:

- Minimize danger to persons;
- Minimize pollution of water courses;
- Minimize area affected by spill; and
- Minimize the degree of disturbance to the area and watercourses during cleanup.

Grieg NL will take all necessary precautions to prevent a reoccurrence of the incident and the EHS Advisor shall prepare a written report as required.

All fuel-powered equipment shall contain appropriately-sized spill kits (23 L). The contents of spill kits shall be routinely inspected and supplies replenished as necessary.

In the event of fuel or hazardous material spills, Project personnel are also to refer to Grieg NL's Spill Management Plan: Land and Water, and emergency contact phone numbers (first page [i]) and section 4.0, *Emergency Response*, of Grieg NL's Emergency Response Plan.

5.2 Forest Fires

A fire at the RAS Hatchery site has the potential to spread to the surrounding area. Conversely, a forest fire or fire at another facility within the Marystown Marine Industrial Park could spread to the RAS Hatchery site. Terrestrial fires could result in habitat alteration or loss and/or mortality of wildlife. Fire fighting chemicals or spilled materials associated with fires could enter freshwater or marine environments, potentially negatively affecting habitat and biota, particularly if permitted to disperse and persist. Fires may also adversely affect air quality and pose risks to human health and safety.

Grieg NL shall take all necessary precautions to prevent fire hazards when working at the site, including, but not limited to, the following:

- Adhering to appropriate permits, including operating permits.
- Storing, handling and disposing of flammable materials and waste appropriately and in accordance with appropriate regulations.
- Smoking in designated areas only.
- Ensuring personnel trained in fire prevention and response including the use of appropriate fire-fighting equipment will be available on site.
- Providing fire-fighting equipment that is in proper operating condition, in compliance with manufacturer standards, and in sufficient quantities.
- Ensuring all fire extinguishers are marked and easily accessible to anyone who may need to use them.

If a fire is encountered, the following protocol shall be followed:

- The individual who discovers the fire shall raise the alarm to alert all on-site personnel.
- Immediately stopping work and controlling all sources of further ignition.
- Personnel trained in fire-fighting and the use of appropriate equipment shall take immediate steps to contain or extinguish the fire.
- Fires shall be reported immediately to the EHS Advisor, Marystown Fire Department, and the nearest Forest Management Unit office for further reporting to the local authorities. The following information shall be provided:
 - name and telephone number
 - time of detection
 - size of fire
 - location of fire
 - weather conditions (rain, sun, wind direction and speed, etc.)
- Follow the appropriate route to the construction site muster station.

Personnel are also referred to Section 7.1, *Fire Emergency Plan (Land-based RAS Hatchery)* of Grieg NL's Emergency Response Plan for fire prevention and response actions.

5.3 Wildlife Encounters

Wildlife encounters pose a potential risk for stress or injury to both the wildlife and site personnel. To reduce the risk to both wildlife and site personnel, the following measures will be implemented:

- Hunting, trapping or fishing by Project personnel is not permitted on site.
- Site and working areas shall be kept clean of food scraps and garbage.
- Wildlife protected disposal containers will be used and will be regularly emptied and transferred to the local landfill.
- No personal pets, domestic or wild, will be allowed on the site.

In addition to the above protection measures, the following protocol will be followed in the event of a wildlife encounter:

- Workers shall not attempt to chase, catch, divert, follow or otherwise harass wildlife by vehicle or on foot.
- Equipment and vehicles shall yield the right-of-way to wildlife.
- Wildlife sightings or encounters shall be reported to the EHS Advisor. All actions in response to nuisance animals shall be the responsibility of Grieg NL.
- If the nest of any bird is encountered during operation activities, work around the nest will be immediately stopped and the EHS Advisor notified.
- Any incidents that result in the displacement or killing of wildlife shall be reported to the EHS Advisor, complete with details on the incident and the names (and contact information) of the persons involved, for reporting as required.

5.4 Extreme Weather Events

Extreme weather events, such as severe winter storms, hurricanes or post-tropical storms, can bring strong winds, heavy snow, rain or freezing rain, flooding, high waves or ice. Such events can disrupt unsecured materials or equipment, or damage buildings. In anticipation of an extreme weather event, precautionary measures to prevent negative impacts to the environment include:

- Securing loose materials, coverings and containers, including waste containers.
- If applicable, appropriately collecting and disposing/storing product from equipment drip pans or tank dyke pads and ensuring drainage equipment is in good condition and clear of debris, snow or ice.
- Checking that sedimentation control structures are secure and in good working order, and capable of handling anticipated flow.

Immediately following an extreme weather event, all on-site environmental protective measures will be checked. Any required repairs will be completed as soon as conditions allow, before any work occurs utilizing the equipment to be repaired/replaced.

5.5 Discovery of a Species at Risk

The following species at risk (as listed on Schedule 1 of the *Species at Risk Act [SARA]*) may occur within the RAS Hatchery site: Red Crossbill (Endangered), Olive-sided Flycatcher (Threatened), Peregrine Falcon (Special Concern), and Rusty Blackbird (Special Concern). Though unlikely to be found within the RAS Hatchery site, these species may occur within the general area.

There is some potential that operation activities may affect Species at Risk. The following measures will be put into place to ensure that the Project does not negatively affect Species at Risk:

- All personnel working on site will adhere to all stipulations set out in the *SARA*, and will be informed that it is illegal to kill, harass, capture or harm any species listed under it; and
- If a Species at Risk, as listed above or otherwise, is discovered, all work in proximity to the location (i.e., outside of the RAS Hatchery) will cease and it will be reported to the EHS Advisor who will then contact ECCC-CWS for further action.

5.6 Mass Mortality Event

If a mass mortality of salmon occurs at the RAS Hatchery, there is concern that the volume of fish mortalities may not be properly handled and will overwhelm local disposal facilities. Also, there is concern about the potential transfer of disease from fish to wild animals. The following procedures will be undertaken:

- Grieg NL would implement its mass mortality response plan (detailed in Grieg NL's Waste Management Plan) which includes the notification of regulatory agencies and activation of depopulation, if required.
- All mortalities at the RAS Hatchery will be removed using equipment and procedures similar to those used during fish transfers to sea cage sites. In this instance, either a well boat or an OCI vessel equipped with industry standard containers will be used to transport the mortalities to a designated outflow wharf in a biosecure manner.
- Biosecure handling and transport will be undertaken to avoid any spillage.
- In the case of a confirmed presence of a reportable fish disease, Grieg NL will contact local providers that are approved to receive the collected mortalities as well as the fish that are live harvested and weigh less than 1 kg.
- If the mass mortality event is not as a result of a reportable disease, the mortalities will be collected and ensilaged to dispose as outlined in Section 4.5
- Fish that weigh more than 1 kg would be harvested and processed according to CFIA recommendations.
- Grieg NL will adhere to governmental guidelines and regulations for the disposal of organic material and fish mortalities

5.7 Catastrophic Failure of Water Supply

There is concern that failure with the well supplying the RAS Hatchery or the pump for the well may jeopardize operations and lead to the mortality of hatchery fish. As requested by the DMAE, Grieg NL will provide a contingency plan for such an unplanned event prior to commencement of hatchery operations.

The cause of the catastrophic failure will determine the course of action:

- Should there be a break in the line supplying the water, the system will be able to continue to run until repairs can be made.
- If the well were to collapse, one of the backup wells would be used to supply water to the facilities.
- If the groundwater were to become polluted, then water from Mortier Bay would be used. A desalination system will be installed in the facility allowing saltwater to be used as a source for the facility if required.

6.0 Legislation, Permits and Authorizations

Grieg NL has identified the various legislation, permits and authorizations to which the company subscribes related to the Project's environmental aspects—see below.

6.1 Legislation

Relevant legislation for the operation of the RAS Hatchery component of the Project includes the following:

- *Fisheries Act*
- *Navigation Protection Act*
- *Transportation of Dangerous Goods Act*
- *Migratory Birds Convention Act*
- *Aquaculture Act*
- *Lands Act*
- *Environmental Protection Act*
- *Urban and Rural Planning Act*
- *Water Resources Act*
- *Occupational Health and Safety Act*
- *Buildings Accessibility Act*
- *Public Safety Act*
- *Fire Prevention Act*
- *Canada Shipping Act*
- *Health of Animals Act*
- Aquaculture Activities Regulations (AAR)
- Town of Marystown Development Regulation
- National Aquatic Animal Health Program
- Tier Three Regulations of Transport Canada
- Annex IV of MARPOL 73/78: Pollution by Sewage from Ships
- Annex V of MARPOL 73/78: Pollution by Garbage from Ships
- Annex VI of MARPOL 73/78: Regulations for the Prevention of Air Pollution from Ships

6.2 Permits and Authorizations

In Canada, the aquaculture industry is regulated and managed by both the federal and provincial governments. Grieg NL is required to adhere to these regulations. The Project must also comply with provincial and municipal regulations related to the operation of the RAS Hatchery. A list of required key permits and approvals is provided in Table 6.1. Grieg NL will house and manage permits and authorizations in dedicated software (i.e., *Intelix*, business intelligence software).

Table 6.1. Anticipated federal, provincial and municipal approvals and permits for the operation phase of the RAS Hatchery.

Permit, License or Regulatory Approval	Activity Requiring Approval	Legislation	Regulatory Agency Responsible	Status ^a
Government of Canada				
DFO Approval	Any aquaculture activities	<i>Fisheries Act</i>	DFO	
Aquatic Animal Health Import Permit	Import of fish eggs	<i>Health of Animals Act</i>	CFIA	
Government of Newfoundland and Labrador				
Aquaculture Licence	Any aquaculture activities	<i>Aquaculture Act</i>	DFLR	
Minister's Approval for the Introduction, Transfer and Transport of Fish	Transportation of fish from one site/facility to another	<i>Aquaculture Act</i>	DFLR	
Application for Crown Land Title	Leasing of land for the land-based facility	<i>Lands Act</i>	DFLR	
Development Certificate	Construction and operation of the land-based facility	<i>Urban and Rural Planning Act</i>	DMAE	
Application for Permit Water and Sewage Works	Obtaining/discharging water for use in construction and operation of the land-based facility	<i>Water Resources Act</i>	DMAE	
Diesel Generator Registration Form	Operation of a generator	<i>Environmental Protection Act</i> and <i>Air Pollution Control Regulations</i>	DMAE	
Water Use Licence	Obtaining water for use in the land-based facility	<i>Water Resources Act</i>	DMAE	
Certificate of Approval for Industrial Facilities/Processes	Operation of the land-based facility	<i>Environmental Protection Act</i>	DMAE	
Certificate of Approval - Water Supply >4,500L/day	Obtaining water for use in the on-land facility	<i>Water Resources Act</i>	DMAE	
Fire Commissioners Approval under the National Building / Fire / Life Safety Code	Construction of any buildings		Service NL	
Petroleum Storage Tank Registration	Storage and Handling of Petroleum Products	<i>Environmental Protection Act</i> and <i>Fire Prevention Act</i>	Service NL	
Electrical Permit	All electrical wiring and infrastructure installation	<i>Public Safety Act</i>	Service NL	
Certificate of Plant Registration for Power, Heat, Refrigeration, Compressed Gas or Combined Plant	Various project related activities		Service NL	
Municipal Government				
Occupancy Permit	Permits must be in place for any development of the land-based facility	Town of Marystown Development Regulations	Marystown Municipal Government	
Compliance with Marystown Municipal Plan	Permits must be in place for any development of the land-based facility	Town of Marystown Development Regulations	Marystown Municipal Government	

Note: ^a The status of the permits will be included prior to commencement of operations. Additionally, all permit requirements, responsible agencies, and legislation will be reviewed and updated (as required) prior to operations.

In addition to the abovementioned required permits and authorizations for Project activities, Grieg NL must abide by the National Code on Introductions and Transfers of Aquatic Organisms, whereby Grieg NL is required to submit an application to DFLR and DFO, which addresses three main risks: genetics, ecosystem and disease prior to any transfer of the fish from the RAS Hatchery to the sea cages for grow-out. The fish will not be permitted to leave the RAS Hatchery until approvals from DFLR and DFO are received.

Grieg NL may also need a Domestic Movement Permit Application to move Finfish and/or Things within Canada (CFIA/ACIA 5743) from CFIA. Whether a permit is required to move aquatic animals or equipment (including nets and cages) depends on the declarations of the reportable disease status of the areas being transferred from and to. CFIA must be contacted by Grieg NL prior to any domestic movements of fish or equipment.

7.0 Contact List

Contact lists will be posted in central, visible locations at the RAS Hatchery. The lists will be kept up to date, and all contacts on the lists will be made aware of their expected role(s) during routine and/or emergency situations.

7.1 Emergency Numbers

Contact information that may be utilized during an emergency is provided in Table 7.1.

Table 7.1. Emergency contact phone numbers for the Project.

Title	Number
Emergency Personnel	911
Marystown Ambulance	709-279-2121
Marystown Fire Department	709-279-1333
Burin Peninsula Health Care	709-891-1040
Marystown Police	709-279-3001
Poison Control	1-866-727-1110
Search and Rescue	1-800-563-2444
Canadian Coast Guard	709-772-4423
Marine Pollution	1-800-563-9089
Emergency Response Organization	TBD
Marine Communication and Transport Center, Placentia	709-227-2181
Marine Mammal in Distress	1-888-895-3003
Poaching and Fisheries Violations	1-800-222-8477
Department Fisheries and Land	709-292-4111
Department Fisheries and Oceans	709-772-5202
Invasive Aquatic Species	1-888-435-4040

7.2 Advisory and Other Contact Numbers

Contact information for appropriate Grieg NL and other advisory personnel are provided in Table 7.2. These designated personnel can be reached at any time, in accordance with established communications protocols.

Table 7.2. Advisory and other contact numbers for the Operation of the RAS Hatchery.

Title	Name	Number
Grieg NL General Manager		TBD
Grieg NL Production Manager		TBD
EHS Advisor		TBD
Owner Representative		TBD
Contractor Project Manager	TBD	TBD
Contractor EHS Coordinator	TBD	TBD
First Feeding Site Manager	TBD	TBD
Smoltification Manager	TBD	TBD
Post Smolt Manager	TBD	TBD
Marine Site Manager	TBD	TBD
Marine Site Manager	TBD	TBD
Marine Site Manager	TBD	TBD
Water Quality Specialist		TBD
EHS Representative land-based	TBD	TBD
EHS Representative marine	TBD	TBD

8.0 Resource Material

Information documents relevant to the Project were included as appendices to the Environmental Impact Statement (EIS). Copies of the EIS and associated documents can be found at Grieg NL's office in Marystown and at public libraries in Marystown (as well as Corner Brook and St. John's).

8.1 Key Reference Material

Environmental documents previously completed for the Project and relevant to the RAS Hatchery are listed in Table 8.1. Personnel are also referred to further documentation referenced throughout this EPP.

Table 8.1. Key Project reference material relevant to environmental protection measures, for construction of the RAS Hatchery. Material was provided as appendices to the Project EIS (LGL Limited 2018).

Document Name and Author	Summary	Release Date
Emergency Response Plan Grieg NL	Details the emergency procedures to be implemented in response to any situation that may endanger the safety and/or health of people; the environment; property and/or equipment.	May 2018
Spill Management Plan: Land and Water Grieg NL	Details the emergency procedures to be implemented in response to a spill that may endanger the safety and/or health of people; the environment; property and/or equipment.	May 2018
Waste Management Plan Grieg NL	Details the procedures to be implemented to manage waste associated with the Project including waste generated during construction of the RAS Hatchery.	May 2018
Fish Health Management Plan Grieg NL	Details the procedures to be implemented to manage fish health at the RAS Hatchery (as well as the sea cage sites).	May 2018
The Cultural, Recreational and Commercial Importance of the Waters of Placentia Bay Component Study Grattan et al. 2018	Provides a detailed description of the cultural, recreational and commercial usage of Placentia Bay. It focuses on fisheries, tourism, recreational activities, marine navigation, and culturally and ecologically important areas. The study also includes mitigation measures that will be undertaken to protect these uses and areas from the potential effects of the Project, as well as follow-up monitoring.	May 2018
Wild Atlantic Salmon Component Study LGL Limited 2018	Provides a review of wild Atlantic salmon with a focus on the salmon that occur in Placentia Bay. It also reviews the potential genetic and ecological interactions between wild and farmed salmon and the mitigation measures and follow-up monitoring intended to minimize the potential effects of Grieg NL's Project.	May 2018
Fish and Fish Habitat Component Study LGL Limited 2018	Provides a review of the existing fish and fish habitat in Placentia Bay with focus on the sea cage sites, the mitigation measures intended to minimize the potential effects of the proposed Project on fish and fish habitat, and the follow-up monitoring intended to validate the effects conclusions in the EIS.	May 2018
Sustainability Report 2017 Grieg Seafood	Defines Grieg's five essential principles for sustainable food production in the ocean and introduces a greenhouse gas account which maps emissions from Grieg Seafood as an organization.	April 2018

9.0 Literature Cited

LGL Limited. 2018. Environmental Impact Statement of the Placentia Bay Atlantic Salmon Aquaculture Project. LGL Rep. FA0144. Rep. by LGL Limited, St. John's, NL for Grieg NL, Marystown, NL. 528 p. + appendices.

Johnson, Roger

From: EA Project Comments <EAProjectComments@gov.nl.ca>
Sent: Thursday, September 27, 2018 8:16 AM
To: Johnson, Roger; EA Project Comments
Cc: Bieger, Tilman; Hendry, Christopher
Subject: RE: EPP Hatchery submitted for review and approval

Thank you Roger.

Regards,

Joanne

Joanne Sweeney

Project EAC Chair
Environmental Assessment Division
Tel. (709) 729-2822

From: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Sent: Thursday, September 27, 2018 7:20 AM
To: EA Project Comments <EAProjectComments@gov.nl.ca>
Cc: Bieger, Tilman <Tilman.Bieger@dfo-mpo.gc.ca>; Hendry, Christopher <Christopher.Hendry@dfo-mpo.gc.ca>
Subject: RE: EPP Hatchery submitted for review and approval

These two documents are acceptable to the Department of Fisheries and Oceans, NL Region. The changes from the last draft have adequately addressed our concerns.

If you have any further comment or question please feel free to contact me at anytime.

Roger Johnson
A/Regional Manager - Aquaculture
Dept. of Fisheries and Oceans
Telephone: (709)772-3296 (O) [REDACTED] (cell)
E-mail: Roger.Johnson@dfo-mpo.gc.ca

s.16(2)(c)

From: EA Project Comments <EAProjectComments@gov.nl.ca>
Sent: Wednesday, September 26, 2018 2:50 PM
To: Hanchar, Dorothea <DorotheaHanchar@gov.nl.ca>; Ficzero, Vicki <vickificzero@gov.nl.ca>; Angelopoulos, John <johnangelopoulos@gov.nl.ca>; Adams, Blair <BlairAdams@gov.nl.ca>; kawaja, jonathan <jonathankawaja@gov.nl.ca>; Whelan, Dr. Daryl S <DarylSWhelan@gov.nl.ca>; Ginn, Melissa (Melissa.Ginn@tc.gc.ca) <Melissa.Ginn@tc.gc.ca>; Hingston, Michael (EC) <michael.hingston@canada.ca> <michael.hingston@canada.ca>; Denning, Allison (HC/SC) <allison.denning@canada.ca> <allison.denning@canada.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Cc: Squires, Susan <SusanSquires@gov.nl.ca>
Subject: EPP Hatchery submitted for review and approval

Good Afternoon,

Thank you for your attendance and participation at this morning's meeting. Grieg NL has made the additions/revisions that were noted during the meeting and has submitted the final version of the EPP for hatchery construction and operations, which I've attached for your review. Please review both EPPs and let me know whether they are acceptable from your department's perspective or whether revisions and/or further information is needed.

I hope to make a recommendation to the MAE Minister regarding the acceptability of the Hatchery EPPs, on behalf of the EA Committee, by the end of this week.

Please call me at (709) 729-2822 or send me an email if you have any questions or concerns.

Regards,

Joanne

Joanne Sweeney

Environmental Assessment Division
Department of Municipal Affairs and Environment
PO Box 8700, St. John's NL A1B 4J6
Tel. (709) 729-2822

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Korchoski, Connie

From: Korchoski, Connie
Sent: 2018–September-27 2:03 PM
To: Richards, Dale E
Subject: FW: For your Final review - RSVP by September 27 – SRR2018/045

Importance: High

Dale,

Do you have any suggested edits on the Grieg SRR? Edits are due back today. If nothing to add, let me know and I will advise Laura to proceed on this one.

Connie

From: Ferris, Laura
Sent: 2018–September-25 11:11 AM
To: Parrill, Erika
Cc: Korchoski, Connie; Richards, Dale E; Metcalfe, Christina
Subject: RE: For your Final review - RSVP by September 27 – SRR2018/045

Thanks Erika! I'll have Christina look at the html (intro page before clicking on PDF link) and I'll have her wait until we hear from Dale before uploading from the NSD. Let me know if you'd prefer we not wait but my thinking is that Dale will also (hypothetically) make changes to that same document on the NSD.

Thanks again!
Laura

Laura Ferris

Web and Publications Administrator, Canadian Science Advisory Secretariat
Fisheries and Oceans Canada / Gouvernement du Canada
www.dfo-mpo.gc.ca/csas-sccs/ - Tel: 613-990-0293

Administratrice de site Web et de publications, Secrétariat canadien de consultation scientifique
Pêches et Océans Canada / Gouvernement du Canada
www.dfo-mpo.gc.ca/csas-sccs/ - Tél. : 613-990-0293



Government
of Canada

Gouvernement
du Canada

Canada

From: Parrill, Erika
Sent: September-24-18 3:15 PM
To: Ferris, Laura
Cc: Korchoski, Connie; Richards, Dale E
Subject: FW: For your Final review - RSVP by September 27 – SRR2018/045

Hi Laura,

I made one small change to the English SRR via tracked changes for you on the NSD in the PDF-proof folder.

Also, I noticed that some of the paragraphs are squat together for the intro page (page you go to before clicking on the PDF link):

On May 30, 2018, the Fisheries Protection Program of the Ecosystems Management Branch in the NL Region of Fisheries and Aquaculture requested that Science undertake a review of specific sections of the EIS for the proposed Placentia Bay Atlantic Salmon Aquaculture. Science undertook a Science Response Process for this review. The information from this scientific review will be provided to Ecosystems Management Branch as part of the Department's response to the overall adequacy of the EIS documents.

The objective of this review was to evaluate

- The sufficiency of baseline data and appropriateness of methodologies to predict effects;
- The mitigation measures proposed by the Proponent;
- The level of certainty in the conclusions reached by the Proponent on the effects;
- The manner in which significance of the environmental effects, as they pertain to DFO's mandate, have been determined (information presented and the validity of the Proponent's methodologies and conclusions);
- The follow-up program proposed by the Proponent; and
- Whether additional information is required from the Proponent to complete the technical review.

The information required for this review can be found in a number of sections throughout the EIS report, and associated Com. The EIS documents are available on the Government of NL's Department of Municipal Affairs and Environment [website](#). This Science Response Report results from the Science Response Process of June 25, 2018 on the Review of the Environment proposed Placentia Bay Atlantic Salmon Aquaculture Project.

Hope this helps. Dale may also have final edits to suggest prior to the deadline.

-Erika ☺

$$\langle \dots \rangle = \frac{1}{N} \sum_{\alpha=1}^N \langle \dots \rangle_{\alpha}$$

Erika Parrill
Centre for Science Advice – NL Region

From: Korchoski, Connie
Sent: Monday, September 24, 2018 8:27 AM
To: Parrill, Erika <Erika.Parrill@dfo-mpo.gc.ca>
Subject: FW: For your Final review - RSVP by September 27 – SRR2018/045

s.19(1)

Good morning.

Who should I forward this for final review? Carol Grant??

Connie

From: Metcalfe, Christina
Sent: 2018–September-21 4:23 PM
To: Korchoski, Connie
Subject: For your Final review - RSVP by September 27 – SRR2018/045

Hi Connie,

Thank you for submitting Science Response Report 2018/045 Environmental Impact Statement for the Placentia Bay Atlantic Salmon Aquaculture Project (Parrill). It will be posted following your approval by September 27th, 2018 (within the next 5 business days). If you need more time, please let us know

Please note: The purpose for PDF-proof approvals is to make sure that the document displays correctly, and should not be an opportunity to review content since the document has already been approved. The understanding with the CSA's is that if we don't hear back from you in the next 5 working days, it will be assumed that the document is approved and we will proceed with the release of the document so not to hold up the publication process.

The links below lead you to the CSAS development website where you will find the webpage text and the document converted to PDF (Adobe Acrobat) for your PDF-proof approval. Your approval can be communicated by replying to this e-mail and the document will be posted shortly after your approval.

English: http://wwwdev.ncr.dfo-mpo.ca/csas-sccs/Publications/ScR-RS/2018/2018_045-eng.html

French: http://wwwdev.ncr.dfo-mpo.ca/csas-sccs/Publications/ScR-RS/2018/2018_045-fra.html

The final MS Word version is on the National Shared Drive at :

<\\symonkenclu01\NATSHARE01\NATSHARED\DATA\csas-sccs/Publications\Submissions\NL\PDF-proof>

Please note that your edits must be made in track changes mode.

Also, please note that the following edits were made to the document:

English:

- Changed title Conclusions from Heading 3 to Heading 2.

French:

- Changed Conclusions from Heading 3 to Heading 2.
- Applied "citation" style to French correct citation and citation-translated style to English correct citation.

Please let me know if you have any questions,

Christina

Christina Metcalfe

Web and Publications Assistant, Canadian Science Advisory Secretariat
Fisheries and Oceans Canada /

Assistante de site Web et de publications, Secrétariat canadien de consultation scientifique
Pêches et Océans Canada

www.dfo-mpo.gc.ca/csas-sccs/ - Tel: 613-990-0659

Christina.Metcalfe@dfo-mpo.gc.ca



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Canada

Johnson, Roger

From: Ruddock, Stella D
Sent: Thursday, September 27, 2018 4:43 PM
To: Johnson, Roger
Subject: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)
Attachments: ML_CSAS_Aqua_Grieg EA_2018-09-27.docx

Importance: High

Hi Roger,

The attached lines were approved in the region and sent to NHQ a couple of weeks ago. The deputy minister's office has come back with a couple of comments. Are you able to, as requested, provide more context around the third bullet (see comment 1) and add more to the last bullet about how the ecological issues are being addressed (see comment 2)?

Please give me a call if you'd like to discuss.

Thanks,
Stella

DRAFT

MEDIA LINES (Anticipatory)

Aquaculture: Grieg Assessment

Issue: In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in Grieg NL being required to prepare a court-ordered Environmental Impact Statement (EIS). DFO participated on an EA Committee, comprised of provincial and other federal government representatives, that was set up to provide advice on the EIS. On September 6, 2018 the provincial Minister announced that the Environmental Impact Statement was acceptable and the project was released from further EA.

Media lines:

- DFO often participates in provincial Environment Assessments (EAs), where it provides input relevant to its mandate.
- In this instance, DFO participated on an EA Committee comprised of provincial and other federal government representatives that was set up by the province to provide advice on the EIS.
- At the request of the Fisheries Protection Program, Ecosystems Management Branch DFO Science also held a formal CSAS peer-review process in the form of a Science Special Response (SSR). The report, which will be published on the DFO CSAS website early this fall
- For the Grieg NL project in Placentia Bay, DFO-NL provided advice in the development of the EIS Guidelines and carried out a comprehensive review of the EIS.
- Issues identified by DFO during the EIS review will be addressed through Provincial conditions of release, including an Environmental Protection Plan (EPP) and Environmental Effects Monitoring Program (EEMP) required for the project.

Commented [D1]: Can we provide more context? Why did the department do this?

If pressed on federal and provincial roles

- The aquaculture industry in NL is governed by a ~~mature and robust~~ provincial and federal regulatory regime, under which aquaculture projects must implement appropriate mitigation and protection measures.
- Grieg NL will still need to obtain licences and permits for aquaculture sites and introductions and transfers, both of which will require review and approval by DFO and provincial departments.
- The decision to release this project from provincial EA lies exclusively with the Province of Newfoundland and Labrador. The provincial Department of Municipal Affairs and Environment can provide information on that decision and their role.

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ea_2018-09-27.docxdocument1

Created on: 27-Sep-18 18-Sep-18
Created by: Stella Ruddock
Docket #:

Last saved by: DFO-MPO
Revised: 27-Sep-18 27-Sep-18 26-Sep-18 1:35
PM1:35 PM12:30 PM4:09 PM

DRAFT

- DFO officials will continue to work with the Province of NL during development of any follow up and monitoring requirements.

If pressed on science:

- DFO Science reviewed the EIS and evaluated the risks associated with the proposed Grieg operation in Placentia Bay at the request of the Fisheries Protection Program, Ecosystems Management Branch.
- DFO Science assessed the report for its sufficiency of baseline data and appropriateness of methodologies to predict effects; mitigation measures; certainty in the conclusions; scientific merit of the information presented and the validity of methodologies and conclusions; proposed follow-up program; and whether additional information was required to complete the technical review.
- DFO Science advised that the EIS documents were extensive and covered the appropriate topics; however, the CSAS report identified that the document's assessment of the level of risk of environmental impacts resulting from the project, its conclusions and mitigation measures required further information.
- The EIS indicates that the proponent will use a method of triploidy induction (which makes salmon sterile) that is better than the industry standard and will reduce impacts on wild salmon populations, particularly interbreeding genetic effects. However, DFO Science advised that additional information was required to support this claim in order to fully evaluate the level of risk.
- DFO Science also advised that repeated testing and verification of imported salmon for sterility is required to limit potential risks to wild salmon populations. As currently described in the EIS, it is unclear whether testing is sufficient to ensure the levels of sterility proposed.
- DFO Science advised that ecological effects (predation, competition, habitat, parasite/pathogen introduction, etc.) were not adequately described in the EIS document.

Commented [D2]: Can we add something along the lines of... : however these issues are being addressed through provincial conditions...

Spokesperson (recommended):

Science: Carole Grant, Section Head, Salmonids, NL Region

Ecosystems Management: TBD

Communications Contact:

Science: Jennifer Duff, 772-7633

Ecosystems Management: Stella Ruddock, 772-7630

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ea_2018-09-27.docxdocument4

Created on: 27-Sep-18 18-Sep-18

Created by: Stella Ruddock

Docket #:

Revised: 27-Sep-18 27-Sep-18 26-Sep-18 1:35
PM1:35 PM12:30 PM4:09 PM

Last saved by: DFO-MPO

From: Parrill, Erika
Sent: Thursday, September 27, 2018 5:13 PM
To: Ferris, Laura; Richards, Dale E
Cc: Korchoski, Connie; Metcalfe, Christina
Subject: RE: For your Final review - RSVP by September 27 – SRR2018/045

[illegible]

From: Ferris, Laura
Sent: Thursday, September 27, 2018 4:39 PM
To: Richards, Dale E <Dale.Richards2@dfo-mpo.gc.ca>; Parrill, Erika <Erika.Parrill@dfo-mpo.gc.ca>
Cc: Korchoski, Connie <Connie.Korchoski@dfo-mpo.gc.ca>; Metcalfe, Christina <Christina.Metcalfe@dfo-mpo.gc.ca>
Subject: RE: For your Final review - RSVP by September 27 – SRR2018/045

Laura

Administratrice de site Web et de publications, Secrétariat canadien de consultation scientifique
Pêches et Océans Canada / Gouvernement du Canada
www.dfo-mpo.gc.ca/csas-sccs/ - Tél. : 613-990-0293



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Canada

Dale

De : Ferris, Laura
Envoyé : September-25-18 11:11 AM
À : Parrill, Erika
Cc : Korchoski, Connie; Richards, Dale E; Metcalfe, Christina
Objet : RE: For your Final review - RSVP by September 27 – SRR2018/045

Thanks Erika! I'll have Christina look at the html (intro page before clicking on PDF link) and I'll have her wait until we hear from Dale before uploading from the NSD. Let me know if you'd prefer we not wait but my thinking is that Dale will also (hypothetically) make changes to that same document on the NSD.

Thanks again!
Laura

Laura Ferris

Web and Publications Administrator, Canadian Science Advisory Secretariat
Fisheries and Oceans Canada / Government of Canada
www.dfo-mpo.gc.ca/csas-sccs/ - Tel: 613-990-0293

Administratrice de site Web et de publications, Secrétariat canadien de consultation scientifique
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www.dfo-mpo.gc.ca/csas-sccs/ - Tél. : 613-990-0293



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From: Parrill, Erika
Sent: September-24-18 3:15 PM
To: Ferris, Laura
Cc: Korchoski, Connie; Richards, Dale E
Subject: FW: For your Final review - RSVP by September 27 – SRR2018/045

Hi Laura,

I made one small change to the English SRR via tracked changes for you on the NSD in the PDF-proof folder.

Also, I noticed that some of the paragraphs are squat together for the intro page (page you go to before clicking on the PDF link):

- have been determined

and associated Com
ment website

Review of the Environment

s.19(1)

is that if we don't hear back from you in the next 5 working days, it will be assumed that the document is approved and we will proceed with the release of the document so not to hold up the publication process.

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French: http://wwwdev.ncr.dfo-mpo.ca/csas-sccs/Publications/ScR-RS/2018/2018_045-fra.html

The final MS Word version is on the National Shared Drive at :

<\\svmonkenclu01\NATSHARE01\NATSHARED\DATA\csas-sccs/Publications\Submissions\NL\PDF-proof>

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- Changed Conclusions from Heading 3 to Heading 2.
- Applied "citation" style to French correct citation and citation-translated style to English correct citation.

Please let me know if you have any questions,

Christina

Christina Metcalfe

Web and Publications Assistant, Canadian Science Advisory Secretariat

Fisheries and Oceans Canada /

Assistante de site Web et de publications, Secrétariat canadien de consultation scientifique

Pêches et Océans Canada

www.dfo-mpo.gc.ca/csas-sccs/ - Tel: 613-990-0659

Christina.Metcalfe@dfo-mpo.gc.ca



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Johnson, Roger

From: Johnson, Roger
Sent: Friday, September 28, 2018 11:06 AM
To: Ruddock, Stella D
Subject: RE: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)
Attachments: ML_CSAS_Aqua_Grieg EA_2018-09-28.docx

See attached

From: Ruddock, Stella D
Sent: Friday, September 28, 2018 8:56 AM
To: Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>
Subject: RE: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)

Yes sure. Do you want to pop down or want me to drop up?

From: Johnson, Roger
Sent: September-28-18 8:55 AM
To: Ruddock, Stella D
Subject: Re: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)

I left you a voicemail

Could we get together fr a few minutes say 1045

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Ruddock, Stella D
Sent: Friday, September 28, 2018 8:48 AM
To: Johnson, Roger
Subject: RE: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)

Yes. If you could make the edits, I'll take care of approvals. Thanks Roger!

Stella

From: Johnson, Roger
Sent: September-27-18 5:53 PM
To: Ruddock, Stella D
Subject: Re: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)

Hopefully in am

Will need to go back to RD before finalized

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Ruddock, Stella D
Sent: Thursday, September 27, 2018 4:47 PM
To: Johnson, Roger
Subject: RE: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)

Is sometime tomorrow possible?

From: Johnson, Roger
Sent: September-27-18 4:47 PM
To: Ruddock, Stella D
Subject: Re: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)

By when???

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Ruddock, Stella D
Sent: Thursday, September 27, 2018 4:43 PM
To: Johnson, Roger
Subject: FOR ACTION: Media Lnes: Environmental Assessment process (Grieg)

Hi Roger,

The attached lines were approved in the region and sent to NHQ a couple of weeks ago. The deputy minister's office has come back with a couple of comments. Are you able to, as requested, provide more context around the third bullet (see comment 1) and add more to the last bullet about how the ecological issues are being addressed (see comment 2)?

Please give me a call if you'd like to discuss.

Thanks,
Stella

MEDIA LINES (Anticipatory)

Aquaculture: Grieg Assessment

Issue: In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in Grieg NL being required to prepare a court-ordered Environmental Impact Statement (EIS). DFO participated on an EA Committee, comprised of provincial and other federal government representatives, that was set up to provide advice on the EIS. On September 6, 2018 the provincial Minister announced that the Environmental Impact Statement was acceptable and the project was released from further EA.

Media lines:

- DFO often participates in provincial Environment Assessments (EAs), where it provides input relevant to its mandate.
- In this instance, DFO participated on an EA Committee comprised of provincial and other federal government representatives that was set up by the province to provide advice on the EIS.
- At the request of the Fisheries Protection Program, Ecosystems Management Branch, DFO Science held a formal CSAS peer-review process in the form of a Science Special Response (SSR). A formal CSAS process was deemed necessary due to the complexity of the EIS. The report will be published on the DFO CSAS website early this fall.
- For the Grieg NL project in Placentia Bay, DFO-NL provided advice in the development of the EIS Guidelines and carried out a comprehensive review of the EIS.
- Issues identified by DFO during the EIS review will be addressed through Provincial conditions of release, including an Environmental Protection Plan (EPP) and Environmental Effects Monitoring Program (EEMP) required for the project.

If pressed on federal and provincial roles

- The aquaculture industry in NL is governed by a robust provincial and federal regulatory regime, under which aquaculture projects must implement appropriate mitigation and protection measures.
- Grieg NL will still need to obtain licenses and permits for aquaculture sites and introductions and transfers, both of which will require review and approval by DFO and provincial departments.
- The decision to release this project from provincial EA lies exclusively with the Province of Newfoundland and Labrador. The provincial Department of Municipal Affairs and Environment can provide information on that decision and their role.

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ea_2018-09-28.docx

Created on: 28-Sep-18
Created by: Stella Ruddock
Docket #:

Last saved by: Johnson, Roger
Revised: 28-Sep-18 8:03 AM

DRAFT

- DFO officials will continue to work with the Province of NL during development of any follow up and monitoring requirements.

If pressed on science:

- DFO Science reviewed the EIS and evaluated the risks associated with the proposed Grieg operation in Placentia Bay at the request of the Fisheries Protection Program, Ecosystems Management Branch.
- DFO Science assessed the report for its sufficiency of baseline data and appropriateness of methodologies to predict effects; mitigation measures; certainty in the conclusions; scientific merit of the information presented and the validity of methodologies and conclusions; proposed follow-up program; and whether additional information was required to complete the technical review.
- DFO Science advised that the EIS documents were extensive and covered the appropriate topics; however, the CSAS report identified that the document's assessment of the level of risk of environmental impacts resulting from the project, its conclusions and mitigation measures required further information.
- The EIS indicates that the proponent will use a method of triploidy induction (which makes salmon sterile) that is better than the industry standard and will reduce impacts on wild salmon populations, particularly interbreeding genetic effects. However, DFO Science advised that additional information was required to support this claim in order to fully evaluate the level of risk.
- DFO Science also advised that repeated testing and verification of imported salmon for sterility is required to limit potential risks to wild salmon populations. As currently described in the EIS, it is unclear whether testing is sufficient to ensure the levels of sterility proposed.
- DFO Science advised that ecological effects (predation, competition, habitat, parasite/pathogen introduction, etc.) were not adequately described in the EIS document. These issues were subsequently dealt with in the terms of release imposed on the project by the NL Government.
- The proponent will have to develop, in consultation with DFO and others, a detailed environmental effects monitoring program. The work on developing this program is currently underway.

Spokesperson (recommended):

Science: Carole Grant, Section Head, Salmonids, NL Region

Ecosystems Management: TBD

Communications Contact:

Science: Jennifer Duff, 772-7633

Ecosystems Management: Stella Ruddock, 772-7630

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ea_2018-09-28.docx

Created on: 28-Sep-18
Created by: Stella Ruddock
Docket #:

Last saved by: Johnson, Roger
Revised: 28-Sep-18 8:03 AM

Pike, Kelly J

From: Finn, Ray
Sent: Friday, September 28, 2018 5:04 PM
To: Ruddock, Stella D
Cc: Pike, Kelly J; Johnson, Roger; Dunderdale, Sara; Pittman, Erika; Duff, Jennifer L; Whiffen, Sam
Subject: RE: FOR REVIEW: Updated Media Lines: Environmental Assessment (Grieg)

Hi Stella – these are lines are fine with me – I approve as RD

From: Ruddock, Stella D
Sent: Friday, September 28, 2018 2:41 PM
To: Finn, Ray <Ray.Finn@dfo-mpo.gc.ca>
Cc: Pike, Kelly J <Kelly.Pike@dfo-mpo.gc.ca>; Johnson, Roger <Roger.Johnson@dfo-mpo.gc.ca>; Dunderdale, Sara <Sara.Dunderdale@dfo-mpo.gc.ca>; Pittman, Erika <Erika.Pittman@dfo-mpo.gc.ca>; Duff, Jennifer L <Jennifer.Duff@dfo-mpo.gc.ca>; Whiffen, Sam <Sam.Whiffen@dfo-mpo.gc.ca>
Subject: FOR REVIEW: Updated Media Lines: Environmental Assessment (Grieg)
Importance: High

Hi Ray,

Please see the attached anticipatory lines, regionally approved and sent to NHQ on September 17.

The information in red was added this morning in response to DMO comments.

Changes have been approved by Roger Johnson and reviewed by RD Communications.

Please let me know of any concerns before I forward to ARDG.

Thanks,
Stella

Stella Ruddock
Communications Advisor (Ecosystems Management)
Newfoundland and Labrador Region
Fisheries and Oceans Canada/Government of Canada
Stella.Ruddock@dfo-mpo.gc.ca/ Tel: 709-772-7630
Media Inquiries: Media.NL@dfo-mpo.gc.ca/ Tel: 709-772-3375

Follow us on Twitter! @DFO_NL

DRAFT

MEDIA LINES (Anticipatory)

Aquaculture: Grieg Assessment

Issue: In 2015, Grieg NL registered plans to establish an aquaculture operation in Placentia Bay. In 2016, the provincial Department of Environment and Conservation (now known as Municipal Affairs and Environment) released the undertaking from further environmental assessment (EA). The release was challenged in court, resulting in Grieg NL being required to prepare a court-ordered Environmental Impact Statement (EIS). DFO participated on an EA Committee, comprised of provincial and other federal government representatives, that was set up to provide advice on the EIS. On September 6, 2018 the provincial Minister announced that the Environmental Impact Statement was acceptable and the project was released from further EA.

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Commented [D1]: Can we provide more context? Why did the department do this?

If pressed on federal and provincial roles

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ea_2018-09-27.docxdocument1

Created on: 27-Sep-18 18-Sep-18
Created by: Stella Ruddock
Docket #:

Last saved by: Valerie Laforce
Revised: 27-Sep-18 27-Sep-18 26-Sep-18 12:30 PM 12:30
PM 4:00 PM

DRAFT

- DFO officials will continue to work with the Province of NL during development of any follow up and monitoring requirements.

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Spokesperson (recommended):

Science: Carole Grant, Section Head, Salmonids, NL Region

Ecosystems Management: TBD

Communications Contact:

Science: Jennifer Duff, 772-7633

Ecosystems Management: Stella Ruddock, 772-7630

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ea_2018-09-27.docxdocument1

Created on: 27-Sep-18 4:08 Sep-18

Created by: Stella Ruddock

Docket #:

Last saved by: Valerie Laforce

Revised: 27-Sep-18 27-Sep-18 26-Sep-18 12:30 PM 12:40

PM 4:00 PM